



OHM Remediation  
Services Corp.

1202 Kettner Boulevard  
San Diego, California 92101



Desert-Storm Material Staging Area, MSC D1  
Marine Corps Air Station  
El Toro, California

3WDIV Contract No. N68711-93-D-1459 – Delivery Order No. 0112 – Revision 0  
OHM Project No. 20242 – Document Control No. SW7995 – March 1, 2000

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# Site Assessment Report

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Appendix A - Tentative Reuse Parcel Location of MSC D1; Appendix B - Excerpts From JEG EBS Report;  
Appendix C - Excerpts From JEG RFA Report; Appendix D - Site Inspection Log;  
Appendix E - Geophysical Survey Data; Appendix F - Field Soil Boring Logs;  
Appendix G - Laboratory Analytical Reports; Appendix H - Data Validation Reports;  
Appendix I - Land Survey Data



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Southwest Division  
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San Diego, California 92132-5190

**Date:** 03-Mar-00

**D.O.:** 112

**Location:** MCAS EL TORO

**FROM:** Stewart Bornhoft, Program Manager

Edwin G. Bond  
Edwin G. Bond, Contracts Manager

**DESCRIPTION** *Site Assessment Report, Desert-Storm Material Staging Area, MSC D1, Revision 1, Transmittal*  
**OF** *Only, dated March 1, 2000*  
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*Revision 0*

*March 1, 2000*

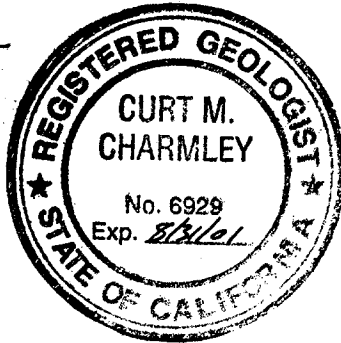


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## *Acronyms and Abbreviations*

bgs	below ground surface
BRAC	Base Realignment and Closure Act
BTEX	benzene, toluene, ethylbenzene, and total xylenes
CA LUFT	California Leaking Underground Fuel Tank
CDM	Camp, Dresser & McKee, Inc.
CTF	Central Treatment Facility
DCN	Document Control Number
DO	Delivery Order
DRMO	Defense Reutilization and Marketing Office
EPA	U.S. Environmental Protection Agency
ft bgs	feet below ground surface
ft/ft	feet per foot
gpm	gallons per minute
GPR	ground penetrating radar
JEG	Jacobs Engineering Group Inc.
MCAS	Marine Corps Air Station
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
msl	mean sea level
MTBE	methyl tert-butyl ether
PR	preliminary review
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
Station	Marine Corps Air Station El Toro
SWDIV	Southwest Division Naval Facilities Engineering Command
SWMU	Solid Waste Management Unit
TAA	Temporary Accumulation Area
TPH	total petroleum hydrocarbons
VOC	volatile organic compound
VSI	visual site inspection
µg/kg	micrograms per kilogram
µg/L	micrograms per liter

# ***Section 1***

## ***Introduction***

This report describes the site verification activities conducted at the Desert Storm Staging Area, also known as Miscellaneous Site of Concern (MSC) D1 at the Marine Corps Air Station El Toro, California (herein after referred to as the Station). OHM Remediation Services Corp (OHM) performed the work under Delivery Order (DO) 0112 for the Southwest Division Naval Facilities Engineering Command (SWDIV) under Remedial Action Contract No. N68711-93-D-1459.

According to information provided in the Final Environmental Baseline Survey (EBS) Report (Jacobs Engineering Group, 1995), the staging area was used to stage materials for embarkation to *Operation Desert Storm* in the Middle East during the time period from approximately August through November 1991. These materials, including petroleum hydrocarbon products, were stored in bermed areas lined with plastic sheets.

OHM conducted verification drilling and sampling activities at MSC D1 during 1999 in order to ascertain whether or not a release of petroleum hydrocarbons occurred during the Desert Storm staging activities. Samples were collected from eight (8) shallow borings at depths of 5, 10, and 20 feet below ground surface for analysis of petroleum hydrocarbons and volatile organic compounds (VOCs). No petroleum hydrocarbons or VOCs were detected in the soil samples at or above laboratory reporting limits. Based upon the evaluation of the historical uses of this site and the results of the field sampling activities, no further action status is recommended for MSC D1.

The Station is located in Orange County, California, approximately 45 miles southeast of the City of Los Angeles, and 1 mile north of the intersection of Interstate 5 (Santa Ana Freeway) and Interstate 405 (San Diego Freeway). The City of Lake Forest is less than 2 miles southeast, and East Irvine is approximately 1 mile to the northwest. The Station covers approximately 4,700 acres. The location of the Station is shown in Figure 1-1, Facility Location Map.

The Station officially closed on July 2, 1999 in accordance with the Base Closure and Realignment Act of 1993 (BRAC III). According to the El Toro Community Reuse Plan (County of Orange, 1997), MSC D1 is located within a tentatively identified *Recreational (Golf) Area*. The County of Orange issued the Preferred Land Use Plan (also known as Concept B) in September 1999; and that plan identified the MSC D1 location within the two areas, the north half designated as *Aviation Support* and the south half designated as *Golf*. The El Toro Community Reuse Plan working maps are provided in Appendix A, Tentative Reuse Parcel Location of MSC D1.

### ***1.1 Site Description and Background***

MSC D1 is located in the southeast quadrant of the Station, north of the Golf Course and south of the east-west runways, as shown on Figure 1-2, Location Map. The site is located

west of Solid Waste Management Unit (SWMU) Number 264 (also known as Defense Reutilization and Marketing Office (DRMO) Yard Number 3) which was investigated during the Resource Conservation and Recovery Act Facility Assessment (RFA). The site encompasses the former landfarming and construction debris staging area site (also known as SWMU 181) which was also investigated during the RFA. The results of the RFA sampling visit for SWMU 181 and SWMU 264 did not identify significant releases to near-surface soils.

OHM reviewed the Base Realignment and Closure Cleanup Plan (SWDIV, 1999), the Final Environmental Baseline Survey Report (JEG, 1995), and the Final Resource Conservation and Recovery Act Facility Assessment Report (JEG, 1993) to obtain background information on the vicinity of MSC D1.

MSC D1 encompasses an unpaved area of approximately 1 to 2 acres, and the area was used during the period from August to November 1991 for staging of equipment and supplies. The staging area consisted of several cells surrounded by 6-inch to 12-inch earthen berms and lined with plastic sheeting. Materials were containerized and placed on top of the plastic sheeting inside of the cells. Materials included fuel, lubricants, adhesives, cleaning compounds, and water. After November 1991, materials staged in this area were transported off station to other facilities. Extracts from the EBS pertaining to MSC D1 are included in Appendix B.

## ***1.2 Previous Investigations***

The MSC D1 site boundary encompasses some portions of the DRMO Storage Yard No. 3 (SWMU 264) and the Land Farm Site (SWMU 181), which were previously investigated during the RCRA Facility Assessment (RFA) (JEG 1993). As part of the RFA process, a preliminary review (PR) and a visual site inspection (VSI) were conducted which identified several Areas of Concern (AOCs), including, SWMU 264 and SWMU 181. Soil sampling activities were conducted at these sites, and based on the results of the soil analytical data, JEG recommended "no further action" (NFA) for both SWMU 264 and 181 (JEG, 1993). These activities are summarized in the following paragraphs.

### **Land Farm Site (SWMU 181)**

A former land farming area for remediating petroleum-contaminated soil was located near the southeast corner of DRMO Storage Yard No. 3, Figure 1-2, and is paved. The land farming area consisted of various soil stockpiles, each 4 - 6 feet high and approximately 80 feet by 125 feet in length consisting of dirt, broken asphalt and concrete, sand, and gravel. As part of the RFA, a total of 7 hand-auger borings (181H1 through 181H7) were advanced to 5 feet bgs in the immediate vicinity of the land farm area. Fifteen soil samples, including one duplicate, were collected from these borings to evaluate the soil conditions beneath the site (JEG 1993). The RFA Report identified low levels of petroleum hydrocarbons in the soil samples collected from SWU 181 (maximum TPH 300 mg/kg and trace estimated quantities of VOCs), and recommended "No Further Action" for SWMU 181. The boring locations

and tables summarizing the analytical results for SWMU 181 are included in Appendix C, Excerpts from JEG RFA Reports.

DRMO Yard No.3 (SWMU 264)

The former DRMO Storage Yard No. 3 is located in the southern area of MSC D1, Figure 1-2. The yard was used to store miscellaneous items and equipment. The storage area is partially surfaced with a thin layer of gravel. As part of the RFA, four hand auger borings (264H1 through 264H4) were advanced to a total depth of 5 feet bgs. A total of nine soil samples were collected and analyzed to evaluate the subsurface conditions beneath the site (JEG 1993). The RFA Report (JEG, 1993) identified low levels of petroleum hydrocarbons in the soil samples (maximum TPH 490 mg/kg) and trace estimated quantities of VOCs. The RFA report included a recommendation for "No Further Action" for SWMU 264. The boring locations and tables summarizing the analytical results for SWMU 264 site are included in Appendix C.

## ***Section 2***

### ***Environmental Setting***

This section summarizes the general physiographic, geologic, and hydrogeologic setting in the vicinity of MSC D1.

#### ***2.1 Physiography and Topography***

The Station is located on the southeastern edge of the Tustin Plain and extends into the Santa Ana Mountains. The Tustin Plain slopes gently toward the west-southwest with land surface elevations ranging from approximately 215 feet above mean sea level (msl) at the western corner to approximately 410 feet msl at the eastern edge of the Station. Elevations within the portion of the Station in the Santa Ana Mountains extend upward to 800 feet msl near the northeast corner of the Station. The topography in the area of MSC D1 gently slopes to the west, with elevations ranging from 388 to 407 feet above msl datum.

#### ***2.2 Geology***

The Station is situated on alluvial materials derived mainly from the Santa Ana Mountains. These Holocene materials consist of coarse-grained stream channel deposits and fine-grained overbank deposits that are up to 300 feet thick (Herndon and Reilly, 1989).

The Holocene alluvial materials conformably overlie Pleistocene sediments predominantly composed of interlayered fine-grained lagoonal and near-shore marine deposits. These materials become increasingly mixed with beach sands, terrace deposits, and stream channel deposits in the eastern portion of the Tustin Plain and along the eastern plain edges. The Quaternary deposits form a heterogeneous mixture of silts and clays, with interbedded sands and fine gravels up to 500 feet thick in the western portion of the Tustin Plain (Singer, 1973).

#### ***2.3 Hydrogeology***

The Station is situated within the Irvine Groundwater Subbasin, which comprises the southeast segment of the Main Orange County Groundwater Basin. Regional groundwater flow in the Subbasin has been to the west and northwest since the 1940s and is controlled locally by large groundwater withdrawal depressions. From 1969 to 1982, an average gradient of 0.0046 foot per foot (ft/ft) to the northwest was reported in the principal aquifer zone of the Irvine area (Banks, 1984). Phase I remedial investigation data indicated a similar groundwater flow direction in the shallower groundwater zone, with a slightly higher gradient of 0.008 ft/ft (JEG, 1993a).

The depth to groundwater beneath the Station ranges from approximately 45 feet below ground surface (bgs) in the foothills to 240 feet bgs in the deepest portion of the Irvine Subbasin. The depth to groundwater in the vicinity of MSC D1 is estimated to be

approximately 163 feet bgs, based on available water-level data from nearby monitoring wells 18\_BGMW02A and 05\_DGMW68. These data are presented in the Groundwater Monitoring Report (Camp Dresser & McKee, Inc. [CDM] Federal Programs, 1997) and summarized in Table 2-1. The well locations are shown in Figure 1-2 (CDM, 1997).

No petroleum hydrocarbons, BTEX compounds, or MTBE were detected during several sampling rounds at well 18\_BGMW02E (the shallowest screened well of the cluster well 18\_BGMW02 near MSC D1).



## ***Section 3***

### ***Field Activities***

OHM conducted soil sampling activities at MSC D1 to determine if soils beneath the site had been affected by the temporary staging of materials during Desert Storm operations. Field activities included: a site inspection; a geophysical survey; verification soil sampling; and a land survey.

Fieldwork was performed in accordance with the following approved Preliminary Draft DO 0024 documents: Work Plan, Contractor Quality Control Plan Addendum, Waste Management Plan, Chemical Data Acquisition Plan (OHM, 1995a), and Site-Specific Health and Safety Plan (OHM, 1995b).

#### ***3.1 Site Inspection***

OHM personnel conducted a site inspection on December 2, 1999, to visually inspect the condition of MSC D1 area. Based on this visual inspection of the area, eight soil boring locations were marked within the MSC D1 site. No evidence of a release or stained surface soil was observed. A copy of the Site Inspection Log is included as Appendix D.

#### ***3.2 Utility Clearance and Geophysical Survey***

The utility clearance consisted of reviewing site-specific utility maps obtained from the Station, reviewing the site inspection log, performing a geophysical survey of the site, and notifying Underground Service Alert of the intent to drill.

On December 2, 1999, Spectrum-Gasch Geophysical conducted a geophysical survey at MSC D1 using a utility locator and ground-penetrating radar (GPR), to locate the presence of underground utilities in the vicinity of proposed drilling areas. The results of the analog utility locator and GPR surveys indicated the presence of electrical lines and sewer lines. A copy of the geophysical survey data is included in Appendix E, Geophysical Survey Data.

#### ***3.3 Verification Drilling Activities***

On December 9, 1999, OHM advanced 8 soil borings within the site boundary of the MSC D1 (MSC D1 SB-01 through MSC D1 SB-08) to approximate total depths of 20 feet bgs. These boring locations were selected based on a site inspection visit and the geophysical survey. The soil boring locations are shown in Figure 3-1, Site Plan.

##### **Drilling and Soil Sampling Techniques**

On December 9, 1999, BC<sup>2</sup> Environmental Corporation, an OHM subcontractor, drilled a total of 8 soil borings with a CME 75 mobile drill rig using hollow-stem auger drilling

techniques. A total of 24 soil samples including, two duplicate samples, were collected using a California-modified split-spoon sampler. Soil samples were collected from depths of 5, 10, and 20 feet bgs and submitted for laboratory analyses. Following the completion of sampling activities, the soil borings were backfilled with a cement-bentonite grout.

To minimize the potential for cross-contamination, drilling and sampling equipment was decontaminated before initiating work at the site, between each soil boring, and at the completion of the work at the site. Decontamination was accomplished by using a pressure washer and/or scrubbing with a non-phosphate detergent and water solution, rinsing with tap water, and rinsing with deionized water.

#### Soil Lithology

Based on the soil samples collected from borings MSC D1 SB01 through SB08, soil conditions appeared consistent throughout the investigated area. The boring logs indicate that the subsurface soil in the vicinity of the MSC D1 primarily consists of silt, silty-sand, and fine-grained sand mixtures. The field boring logs, describing soils underlying the site and indicating soil sample collection intervals are presented in Appendix F, Field Soil Boring Logs.

#### Sample Tracking and Analytical Methods

Sample handling, documentation, and packaging, was conducted in accordance with the procedures described in the approved Draft Work Plan (OHM, 1995a). The soil samples were analyzed for:

- Total petroleum hydrocarbons (TPH-extractable and purgeable) as JP-5 using CA LUFT Method 8015 Modified;
- Volatile organic compounds (VOCs), including methyl tert-butyl ether (MTBE) using USEPA Method 8260A

The analytical results are summarized in Table 3-1, and the laboratory analytical reports are enclosed in Appendix G.

#### Quality Assurance/Quality Control

Field quality assurance/quality control (QA/QC) samples were collected during sampling activities to evaluate the consistency and accuracy of the analytical data. Field QC samples for the MSC D1 investigation consisted of equipment rinsate, soil sample duplicate, and trip blank samples as follows:

- Equipment rinsate samples were collected at a frequency of 1 per day.
- Two duplicate soil samples were collected.
- Trip blank samples were collected at a frequency of 1 blank for each cooler containing samples for VOC analysis.

The QA/QC analytical results are summarized in Table 3-2, and the analytical laboratory reports for these analyses are also enclosed in Appendix G.

#### Data Validation

This section addresses the validity and quality of the data collected from MSC D1 site. Analytical data were reviewed and validated in accordance with the EPA *National Functional Guidelines for Organic and Inorganic Data Review* (U.S. EPA, 1994). Laboratory Data Consultants (LDC), an independent data validation company, performed Level III and Level IV validation on the data. A hard copy of the LDC report is provided in Appendix H, Data Validation Reports.

The data were qualified by LDC to indicate whether the data has been affected by any deviation from the analytical protocols established in the Draft Supplemental Work Plan (OHM, 1997a). Unusable data was qualified with an "R" (rejected). All other results were either unqualified (no flag), nondetected ("U" flag), nondetected with uncertainty in the report detection limits ("UJ" flag), or detected with uncertainty in the reported concentration ("J" flag).

All data associated with the MSC D1 site were usable and acceptable as qualified. The analytical results and associated qualifiers are summarized in Tables 3-1 and 3-2.

#### Analytical Results

TPH as gas or diesel was not detected in any of the soil samples at or exceeding the laboratory reporting limits. No VOC analytes, including benzene and MTBE, were detected at or exceeding the laboratory reporting limits in the soil samples collected from borings MSC D1 SB01 through SB08.

The laboratory analytical results do not indicate a release of petroleum hydrocarbons and/or volatile organic compounds to the vadose zone beneath MSC D1. The analytical results of the soil samples collected from the verification borings are presented in Table 3-1 and summarized in Figure 3-1.

#### Disposal of Soil Cuttings

Soil cuttings generated during drilling operations were placed in 55-gallon drums, labeled, and stored at the Station's Central Treatment Facility (CTF) compound near Installation Restoration Program (IRP) Site 3 at the cross section of North Marine Way and Desert Storm Road. Analyses of the soil boring samples indicated that the soils were non-hazardous. The drummed soils were placed in the clean soil stockpile at the CTF.

### **3.4 Land Surveying**

After completing the verification drilling, the soil boring locations were surveyed on December 14, 1999 by Cal Vada Surveying, Inc., a California-registered land surveyor. The surveyed locations were measured to  $\pm 0.01$  ft/ft horizontally and tied to the California State Plane Coordinate Systems, North American Datum 1983. The surveyed elevations were

measured to  $\pm 0.01$  feet vertically and tied to mean sea level datum. The surveyed plan for MSC D1 is presented as Appendix I, Land Survey Plan.

## ***Section 4***

# ***Conclusions and Recommendations***

The following observations and conclusions are based upon information from previous RFA data, background information, and soil sampling data from verification soil borings:

- MSC D1 was used as a temporary material staging area from August to November 1991 for supplies used overseas during the *Desert Storm Operations*.
- The depth to groundwater at MSC D1 site is estimated to be approximately 163 feet bgs based on historical data from nearby groundwater monitoring wells 18\_BGMW02E and 05\_DGMW68.
- The MSC D1 site boundary encompasses portions of the DRMO Storage Yard No. 3 (SWMU 264) and the Land Farm site (SWMU 181). SWMU 264 and 181 sites were investigated by JEG as part of the RFA. Soil samples were collected from a total of 4 hand auger soil borings at SWMU 264 and 7 hand auger soil borings at SWMU 181. Low levels of petroleum hydrocarbons were detected in the soil samples at SWMU 181 and SWMU 264, and no further action was recommended.
- OHM evaluated the MSC D1 site for a potential release of materials to the vadose zone. Eight verification soil borings were advanced at the site to approximate total depths of 20 feet bgs. A total of 24 soil samples were collected and analyzed. No TPH analytes (extractable or purgeable) or VOC analytes, including BTEX and MTBE, were detected in concentrations equal to or exceeding the laboratory reporting limits in any of the soil samples.

Based on the analytical results from the OHM site verification soil sampling and JEG RFA soil sampling at SWMU 264 and 181, there is no evidence of a release of petroleum hydrocarbons and/or VOCs at MSC D1 site. The temporary staging of materials did not impact the subsurface soil at MSC D1 site. Therefore, on behalf of the Station, OHM recommends that this report be submitted to the California Regional Water Quality Control Board, Santa Ana Region, and that "No Further Action" status for MSC D1 site be requested.

## Section 5

# References

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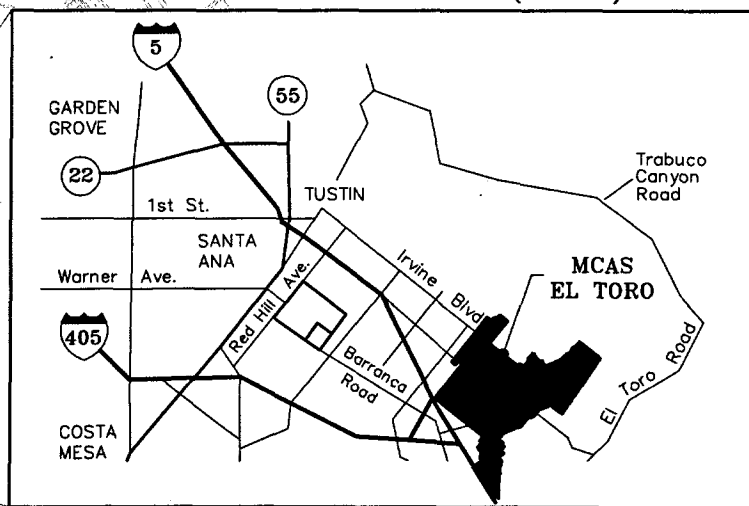
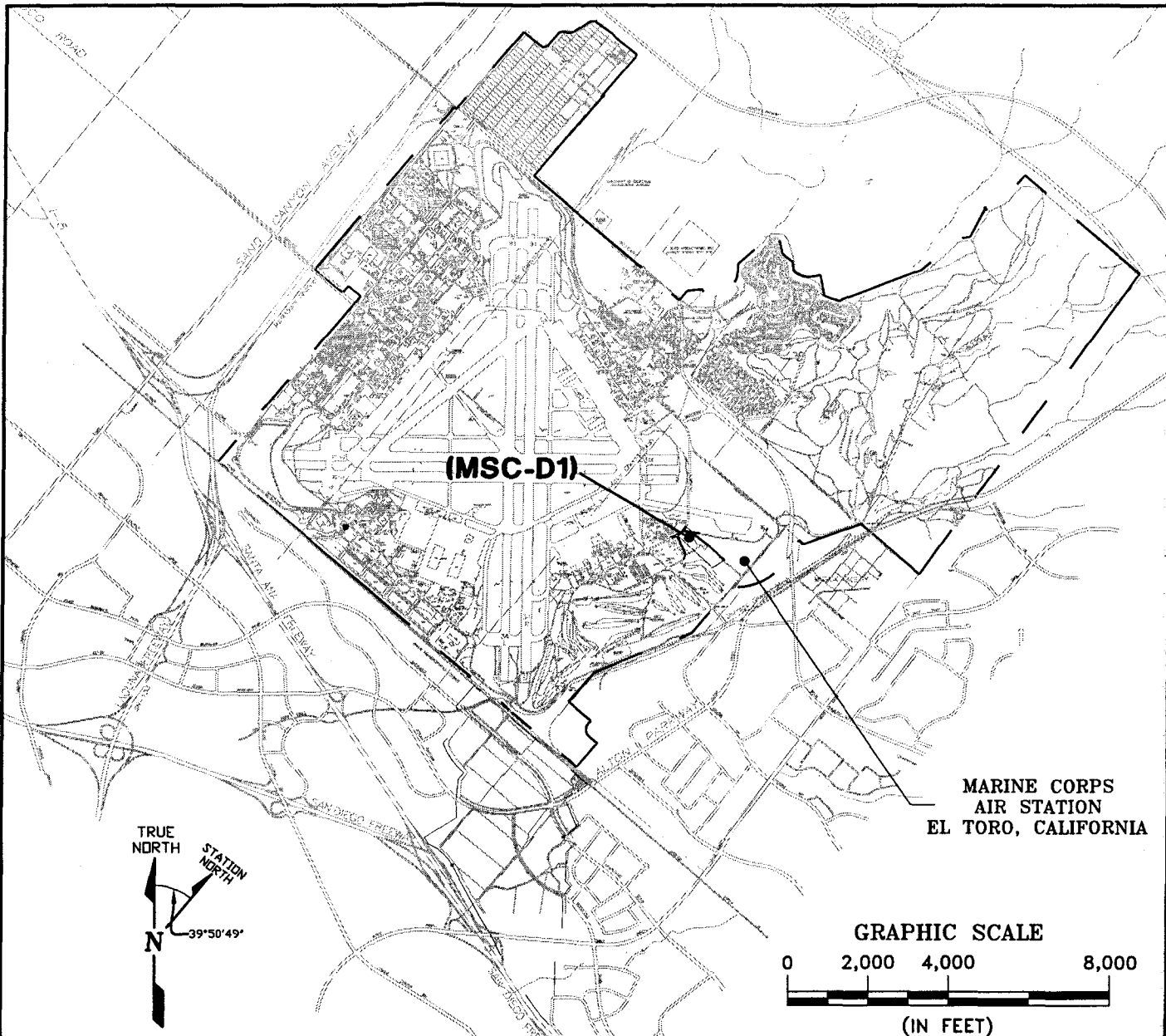
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## *Figures*

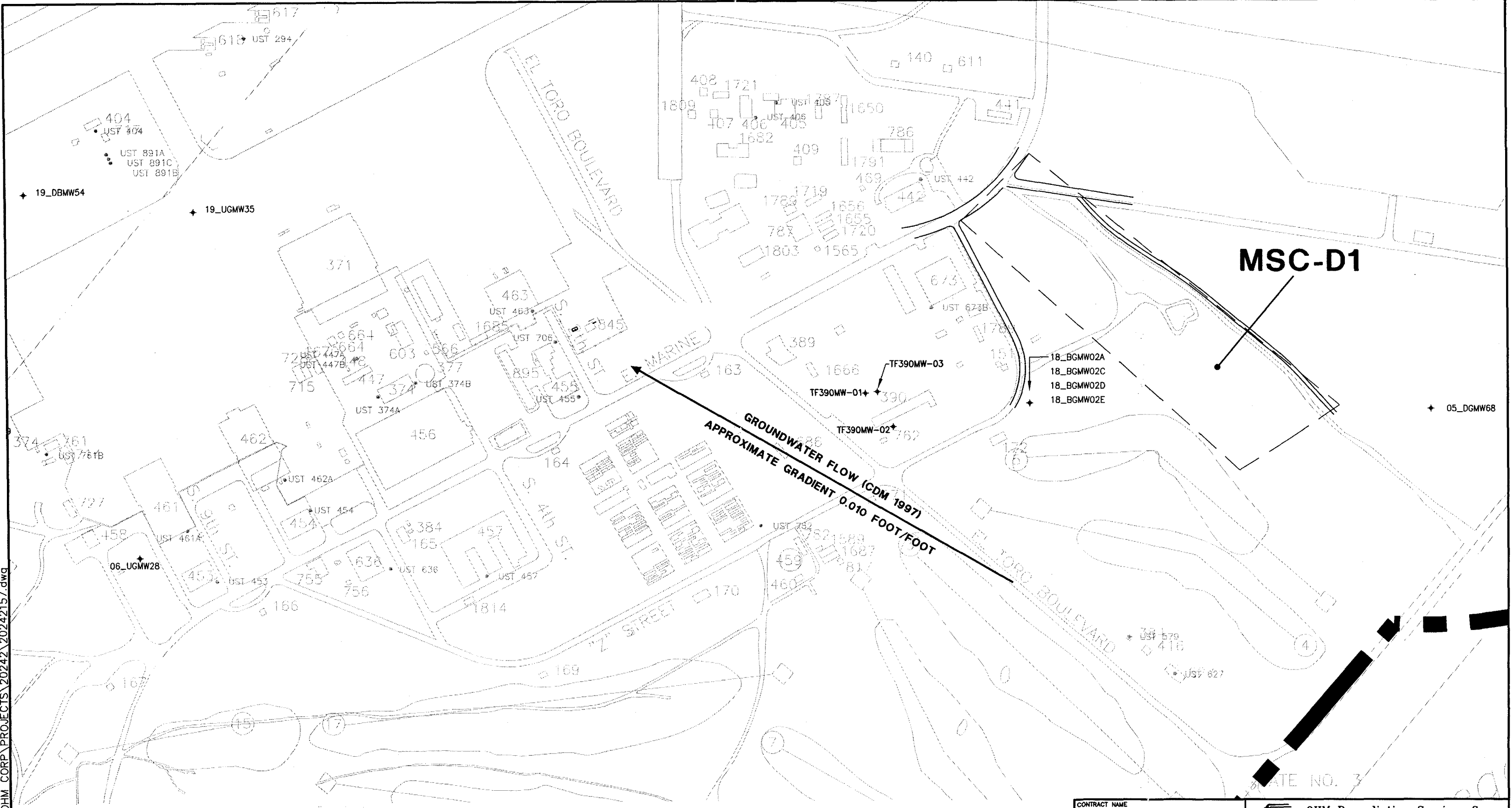




 <b>OHM Remediation Services Corp.</b> A Subsidiary of OHM Corporation SAN DIEGO, CA				DRAWN BY <b>R. PIRMORADIAN</b>		DATE <b>3/1/2000</b>		<b>FACILITY LOCATION MAP</b> <b>MSC-D1</b>  <b>MARINE CORPS AIR STATION</b> <b>EL TORO, CALIFORNIA</b>									
CONTRACT NAME <b>SWDIV</b>				CHECKED BY <b>DR</b>		DATE <b>3/1/00</b>											
				APPROVED BY <b>[Signature]</b>		DATE <b>3/1/00</b>											
AUTOCAD FILE No. <b>20242156.DWG</b>				PLOT SCALE <b>1"=1</b>		SHEET OF <b>1 1</b>		SCALE <b>1"=4,000'</b>		DOCUMENT CONTROL No. <b>SW7995</b>		OHM PROJECT No. <b>20242</b>		FIGURE No. <b>FIG 1-1</b>		REVISION <b>0</b>	

Mar 01, 2000 - 10:25:15 I:\OHM CORP\PROJECTS\20242\20242156.dwg

Feb 22, 2000 16:40:55 I:\OHM CORP\PROJECTS\20242\20242157.dwg



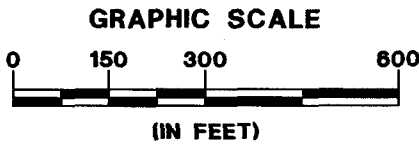
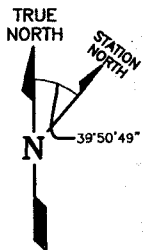
MSC-D1

CONTRACT NAME <b>SWDIV</b>		<b>OHM Remediation Services Corp.</b> A Subsidiary of OHM Corporation IRVINE, CA	
DRAWN BY <b>R. PIRMORADIAN</b>		DATE <b>2/22/2000</b>	
CHECKED BY <b>DR</b>		DATE <b>2/29/00</b>	
APPROVED BY		DATE	
PROJECT MANAGER <b>[Signature]</b>		DATE <b>3/1/00</b>	
AUTOCAD FILE No. <b>20242157.DWG</b>			
SCALE <b>1"=300'</b>	SHEET <b>1</b>	OF <b>1</b>	DOCUMENT CONTROL No. <b>SW7995</b>
OHM PROJECT No. <b>20242</b>		DRAWING No. <b>FIG 1-2</b>	

LOCATION MAP  
MSC-D1

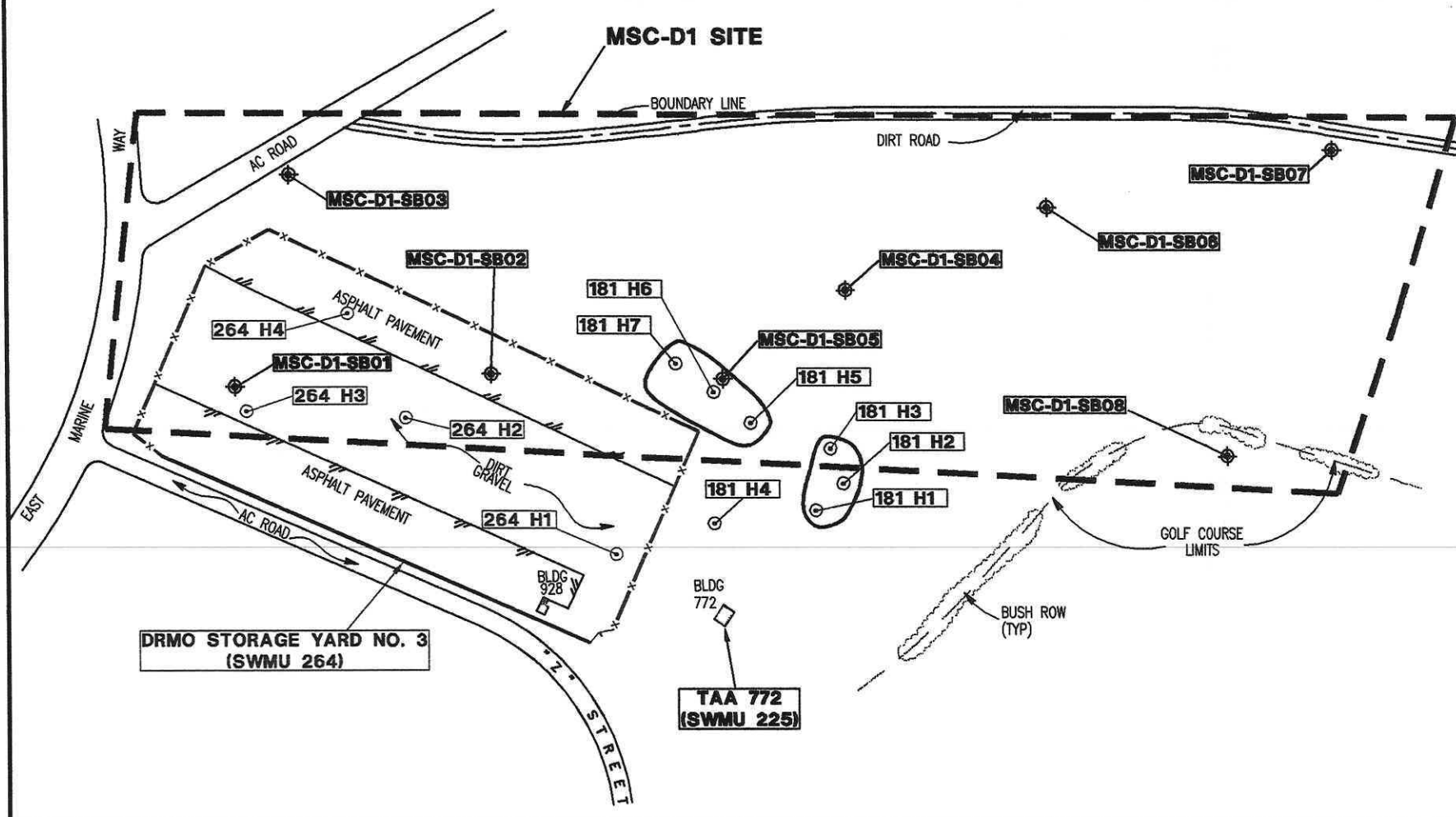
MARINE CORPS AIR STATION  
EL TORO, CALIFORNIA

**EXPLANATION:**  
\* UNDERGROUND STORAGE TANKS  
+ GROUNDWATER MONITORING WELL



REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED

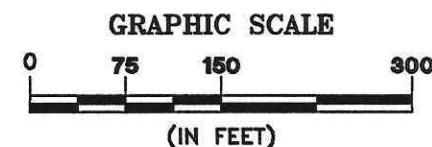
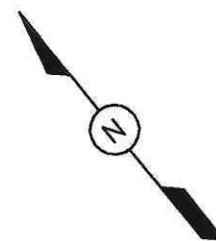
Feb 23, 2000 - 14:50:34 I:\OHM CORP\PROJECTS\20242\20242154.dwg



**LEGEND:**

- 264 H4 ● SWMU 264 HAND AUGER LOCATION
- 181 H1 ● SWMU 181 HAND AUGER LOCATION
- MSC-D1-SB01 ● OHM SOIL BORING LOCATION
- [Rectangle] SWMU 264 DRMO YARD NO. 3 APPROXIMATE BOUNDARY
- [Oval] SWMU 181 LAND FARM SITE APPROXIMATE BOUNDARY
- [Dashed Line] MSC-D1 APPROXIMATE BOUNDARY
- [Wavy Line] BUSH ROW

DATE OF SURVEY: 12/14/99



REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED
01	97102MSC-D1.DWG BY CALVADA SURVEYING INC.	12/14/99	

**SAMPLE LOCATION AND DATA SUMMARY**

Boring Number	Location Northing (NAD) 83	Easting (NAD) 83	Sample: Elevation Number (ft msl)	CA LUFT 8015M			EPA 8260A		Methyl tert- butyl ether µg/kg	Toluene µg/kg	Total Xylenes µg/kg	
				Depth (ft bgs)	TPH as: Diesel mg/kg	Gasoline mg/kg	VOCs: Benzene µg/kg	Ethylbenzene µg/kg				
MSC-D1-SB01	2189926.55	6115884.754	389.3	20242-1054	5.0	11 U	1.1 U	5.3 U	5.3 U	11 U	5.3 U	5.3 U
				20242-1055	10.0	11 U	1.1 U	5.6 U	5.6 U	11 U	5.6 U	5.6 U
				20242-1056	20.0	10 U	1 U	5.2 U	5.2 U	10 U	5.2 U	5.2 U
MSC-D1-SB02	2189117.39	6116081.59	392.92	20242-1057	5.0	11 U	1.1 U	5.3 U	5.3 U	11 U	5.3 U	5.3 U
				20242-1058	10.0	11 U	1.1 U	5.4 U	5.4 U	11 U	5.4 U	5.4 U
				20242-1059	20.0	11 U	1.1 U	5.4 U	5.4 U	11 U	5.4 U	5.4 U
MSC-D1-SB03	2189385.28	6116052.991	392.07	20242-1060	5.0	10 U	1 U	5.2 U	5.2 U	10 U	5.2 U	5.2 U
				20242-1061	10.0	10 U	1 U	5.1 U	5.1 U	10 U	5.1 U	5.1 U
				20242-1062	20.0	11 U	1.1 U	5.3 U	5.3 U	11 U	5.3 U	5.3 U
				20242-1063 (Dup)	20.5	10 U	1 U	5.1 U	5.1 U	10 U	5.1 U	5.1 U
MSC-D1-SB04	2188965.94	6116393.675	398.52	20242-1064	5.0	11 U	1.1 U	5.6 U	5.6 U	11 U	5.6 U	5.6 U
				20242-1065	10.0	11 U	1.1 U	5.4 U	5.4 U	11 U	5.4 U	5.4 U
				20242-1066	20.0	11 U	1.1 U	5.5 U	5.5 U	11 U	5.5 U	5.5 U
MSC-D1-SB05	2188974.62	6116249.618	397.07	20242-1067	5.0	11 U	1.1 U	5.7 U	5.7 U	11 U	5.7 U	5.7 U
				20242-1068	10.0	11 U	1.1 U	5.6 U	5.6 U	11 U	5.6 U	5.6 U
				20242-1069	20.0	12 U	1.2 U	5.9 U	5.9 U	12 U	5.9 U	5.9 U
MSC-D1-SB06	2188905.73	6116592.214	402.25	20242-1070	5.0	11 U	1.1 U	5.4 U	5.4 U	11 U	5.4 U	5.4 U
				20242-1071	10.0	10 U	1 U	5.2 U	5.2 U	10 U	5.2 U	5.2 U
				20242-1072	20.0	10 U	1 U	5.2 U	5.2 U	10 U	5.2 U	5.2 U
MSC-D1-SB07	2188776.06	6116837.635	407.35	20242-1073	5.0	11 U	1.1 U	5.3 U	5.3 U	11 U	5.3 U	5.3 U
				20242-1074	10.0	11 U	1.1 U	5.3 U	5.3 U	11 U	5.3 U	5.3 U
				20242-1075 (Dup)	10.5	12 U	1.2 U	5.8 U	5.8 U	12 U	5.8 U	5.8 U
				20242-1076	20.0	11 U	1.1 U	5.6 U	5.6 U	11 U	5.6 U	5.6 U
MSC-D1-SB08	2188614.24	6116575.433	400.2	20242-1077	5.0	12 U	1.2 U	5.8 U	5.8 U	12 U	5.8 U	5.8 U
				20242-1078	10.0	10 U	1 U	5.2 U	5.2 U	10 U	5.2 U	5.2 U
				20242-1079	20.0	12 U	1.2 U	5.8 U	5.8 U	12 U	5.8 U	5.8 U

**EXPLANATION:**

NAD 83 - North American Datum, 1983  
ft msl - Feet above mean sea level datum  
ft bgs - Feet below ground surface  
CA LUFT - California leaking underground fuel tank  
EPA - US Environmental Protection Agency  
J - estimated value  
U - not detected at or above the stated reporting limit  
UJ - estimated reporting limit  
M - modified  
mg/kg - milligrams per kilogram  
µg/kg - micrograms per kilogram  
SB - soil boring  
TPH - total petroleum hydrocarbons

CONTRACT NAME <b>SWDIV</b>		<b>OHM Remediation Services Corp.</b> A Subsidiary of OHM Corporation IRVINE, CA	
DRAWN BY <b>R. PIRMORADIAN</b>	DATE <b>2/23/2000</b>	<b>SITE PLAN MSC-D1</b>	
CHECKED BY <b>DR</b>	DATE <b>2/1/00</b>		
APPROVED BY	DATE		
PROJECT MANAGER <b>W. Seelbach</b>		DATE <b>3/1/00</b>	
AUTOCAD FILE No. <b>20242154.DWG</b>		MARINE CORPS AIR STATION EL TORO, CALIFORNIA	
SCALE <b>1"=150'</b>	SHEET <b>1</b>	OF <b>1</b>	DRAWING No. <b>FIG 3-1</b>
DOCUMENT CONTROL No. <b>SW7995</b>		OHM PROJECT No. <b>20242</b>	

# ***Tables***

**Table 2-1**  
**Monitoring Well Data Summary – MSC D1 Vicinity**

Monitoring Well Identification Number	Approximate Distance from MSC D1 (feet)	Direction from MSC D1	TOP OF CASING (feet, msl)	Screened Interval (feet, bgs)	Depth To Water (feet TOC)	Well Total Depth (feet, bgs)	Water Level Elevation (feet, msl)
18_BGMW02E	450	Southwest	391.72	198 – 233	163.64	233	228.08
05_DGMW68	950	Southeast	416.95	198 – 210	164.3	215	252.65

*bgs – below ground surface*

*MSC – miscellaneous site of concern*

*TOC – Top of Casing*

*msl – mean sea level*

*Groundwater Measurement Data – 7/97*

**Table 3-1****Summary of Analytical Results for Soil Samples — Site MSC D1**

Sample Identification		20242-1054	20242-1055	20242-1056	20242-1057	20242-1058	20242-1059	20242-1060
Location Code		MSC-D1-SB01	MSC-D1-SB01	MSC-D1-SB01	MSC-D1-SB02	MSC-D1-SB02	MSC-D1-SB02	MSC-D1-SB03
Date Sampled		12/09/99	12/09/99	12/09/99	12/09/99	12/09/99	12/09/99	12/09/99
Depth (feet below ground surface)		5.0	10.0	20.0	5.0	10.0	20.0	5.0
	Unit							
<i>CA LUFT 8015M</i>								
TPH as Diesel	mg/kg	11 U	11 U	10 U	11 U	11 U	11 U	10 U
TPH as Gasoline	mg/kg	1.1 U	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1 U
<i>EPA 8260A</i>								
1,1,1-Trichloroethane	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
1,1,2,2-Tetrachloroethane	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
1,1,2-Trichloroethane	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
1,1-Dichloroethane	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
1,1-Dichloroethene	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
1,2-Dichloroethane	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
1,2-Dichloropropane	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
2-Butanone (MEK)	µg/kg	53 U	56 U	52 U	53 U	54 U	54 U	52 U
2-Chloroethyl vinyl ether	µg/kg	53 U	56 U	52 U	53 U	54 U	54 U	52 U
2-Hexanone	µg/kg	53 U	56 U	52 U	53 U	54 U	54 U	52 U
4-Methyl-2-pentanone (MIBK)	µg/kg	53 U	56 U	52 U	53 U	54 U	54 U	52 U
Acetone	µg/kg	53 UJ	56 UJ	52 UJ	53 UJ	54 UJ	54 UJ	52 UJ
Benzene	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Bromodichloromethane	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Bromoform	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Bromomethane	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Carbon disulfide	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Carbon tetrachloride	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Chlorobenzene	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Chloroethane	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Chloroform	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Chloromethane	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
cis-1,2-Dichloroethene	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
cis-1,3-Dichloropropene	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Dibromochloromethane	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Ethylbenzene	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Methyl tert-butyl ether (MTBE)	µg/kg	11 U	11 U	10 U	11 U	11 U	11 U	10 U
Methylene chloride	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Styrene	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U

**Table 3-1****Summary of Analytical Results for Soil Samples — Site MSC D1**

Sample Identification		20242-1054	20242-1055	20242-1056	20242-1057	20242-1058	20242-1059	20242-1060
Location Code		MSC-D1-SB01	MSC-D1-SB01	MSC-D1-SB01	MSC-D1-SB02	MSC-D1-SB02	MSC-D1-SB02	MSC-D1-SB03
Date Sampled		12/09/99	12/09/99	12/09/99	12/09/99	12/09/99	12/09/99	12/09/99
Depth (feet below ground surface)		5.0	10.0	20.0	5.0	10.0	20.0	5.0
	Unit							
Tetrachloroethene	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Toluene	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
trans-1,2-Dichloroethene	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
trans-1,3-Dichloropropene	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Trichloroethene	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Vinyl acetate	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Vinyl chloride	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U
Xylenes (total)	µg/kg	5.3 U	5.6 U	5.2 U	5.3 U	5.4 U	5.4 U	5.2 U

**Table 3-1**  
**Summary of Analytical Results for Soil Samples — Site MSC D1**

Sample Identification		20242-1061	20242-1062	20242-1063 (Dup)	20242-1064	20242-1065	20242-1066	20242-1067
Location Code		MSC-D1-SB03	MSC-D1-SB03	MSC-D1-SB03	MSC-D1-SB04	MSC-D1-SB04	MSC-D1-SB04	MSC-D1-SB05
Date Sampled		12/09/99	12/09/99	12/09/99	12/09/99	12/09/99	12/09/99	12/09/99
Depth (feet below ground surface)		10.0	20.0	20.5	5.0	10.0	20.0	5.0
	Unit							
<b>CA LUFT 8015M</b>								
TPH as Diesel	mg/kg	10 U	11 U	10 U	11 U	11 U	11 U	11 U
TPH as Gasoline	mg/kg	1 U	1.1 U	1 U	1.1 U	1.1 U	1.1 U	1.1 U
<b>EPA 8260A</b>								
1,1,1-Trichloroethane	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
1,1,2,2-Tetrachloroethane	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
1,1,2-Trichloroethane	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
1,1-Dichloroethane	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
1,1-Dichloroethene	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
1,2-Dichloroethane	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
1,2-Dichloropropane	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
2-Butanone (MEK)	µg/kg	51 U	53 U	51 U	56 U	54 U	55 U	57 U
2-Chloroethyl vinyl ether	µg/kg	51 U	53 U	51 U	56 U	54 U	55 U	57 U
2-Hexanone	µg/kg	51 U	53 U	51 U	56 U	54 U	55 U	57 U
4-Methyl-2-pentanone (MIBK)	µg/kg	51 U	53 U	51 U	56 U	54 U	55 U	57 U
Acetone	µg/kg	51 UJ	53 UJ	51 UJ	56 UJ	54 UJ	55 UJ	57 UJ
Benzene	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Bromodichloromethane	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Bromoform	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Bromomethane	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Carbon disulfide	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Carbon tetrachloride	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Chlorobenzene	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Chloroethane	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Chloroform	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Chloromethane	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
cis-1,2-Dichloroethene	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
cis-1,3-Dichloropropene	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Dibromochloromethane	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Ethylbenzene	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Methyl tert-butyl ether (MTBE)	µg/kg	10 U	11 U	10 U	11 U	11 U	11 U	11 U
Methylene chloride	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Styrene	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U



**Table 3-1****Summary of Analytical Results for Soil Samples — Site MSC D1**

<b>Sample Identification</b>		20242-1061	20242-1062	20242-1063 (Dup)	20242-1064	20242-1065	20242-1066	20242-1067
<b>Location Code</b>		MSC-D1-SB03	MSC-D1-SB03	MSC-D1-SB03	MSC-D1-SB04	MSC-D1-SB04	MSC-D1-SB04	MSC-D1-SB05
<b>Date Sampled</b>		12/09/99	12/09/99	12/09/99	12/09/99	12/09/99	12/09/99	12/09/99
<b>Depth (feet below ground surface)</b>		10.0	20.0	20.5	5.0	10.0	20.0	5.0
	<b>Unit</b>							
Tetrachloroethene	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Toluene	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
trans-1,2-Dichloroethene	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
trans-1,3-Dichloropropene	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Trichloroethene	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Vinyl acetate	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Vinyl chloride	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U
Xylenes (total)	µg/kg	5.1 U	5.3 U	5.1 U	5.6 U	5.4 U	5.5 U	5.7 U

**Table 3-1****Summary of Analytical Results for Soil Samples — Site MSC D1**

Sample Identification		20242-1068	20242-1069	20242-1070	20242-1071	20242-1072	20242-1073	20242-1074
Location Code		MSC-D1-SB05	MSC-D1-SB05	MSC-D1-SB06	MSC-D1-SB06	MSC-D1-SB06	MSC-D1-SB07	MSC-D1-SB07
Date Sampled		12/09/99	12/09/99	12/09/99	12/09/99	12/09/99	12/09/99	12/09/99
Depth (feet below ground surface)		10.0	20.0	5.0	10.0	20.0	5.0	10.0
	Unit							
<b>CA LUFT 8015M</b>								
TPH as Diesel	mg/kg	11 U	12 U	11 U	10 U	10 U	11 U	11 U
TPH as Gasoline	mg/kg	1.1 U	1.2 U	1.1 U	1 U	1 U	1.1 U	1.1 U
<b>EPA 8260A</b>								
1,1,1-Trichloroethane	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
1,1,2,2-Tetrachloroethane	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
1,1,2-Trichloroethane	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
1,1-Dichloroethane	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
1,1-Dichloroethene	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
1,2-Dichloroethane	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
1,2-Dichloropropane	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
2-Butanone (MEK)	µg/kg	56 U	59 U	54 U	52 U	52 U	53 U	53 U
2-Chloroethyl vinyl ether	µg/kg	56 U	59 U	54 U	52 U	52 U	53 U	53 U
2-Hexanone	µg/kg	56 U	59 U	54 U	52 U	52 U	53 U	53 U
4-Methyl-2-pentanone (MIBK)	µg/kg	56 U	59 U	54 U	52 U	52 U	53 U	53 U
Acetone	µg/kg	56 UJ	59 UJ	54 UJ	52 U	52 U	53 UJ	53 UJ
Benzene	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Bromodichloromethane	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Bromoform	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Bromomethane	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Carbon disulfide	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Carbon tetrachloride	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Chlorobenzene	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Chloroethane	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Chloroform	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Chloromethane	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
cis-1,2-Dichloroethene	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
cis-1,3-Dichloropropene	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Dibromochloromethane	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Ethylbenzene	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Methyl tert-butyl ether (MTBE)	µg/kg	11 U	12 U	11 U	10 U	10 U	11 U	11 U
Methylene chloride	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Styrene	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U

**Table 3-1****Summary of Analytical Results for Soil Samples — Site MSC D1**

Sample Identification		20242-1068	20242-1069	20242-1070	20242-1071	20242-1072	20242-1073	20242-1074
Location Code		MSC-D1-SB05	MSC-D1-SB05	MSC-D1-SB06	MSC-D1-SB06	MSC-D1-SB06	MSC-D1-SB07	MSC-D1-SB07
Date Sampled		12/09/99	12/09/99	12/09/99	12/09/99	12/09/99	12/09/99	12/09/99
Depth (feet below ground surface)		10.0	20.0	5.0	10.0	20.0	5.0	10.0
	Unit							
Tetrachloroethene	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Toluene	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
trans-1,2-Dichloroethene	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
trans-1,3-Dichloropropene	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Trichloroethene	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Vinyl acetate	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Vinyl chloride	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U
Xylenes (total)	µg/kg	5.6 U	5.9 U	5.4 U	5.2 U	5.2 U	5.3 U	5.3 U

**Table 3-1****Summary of Analytical Results for Soil Samples — Site MSC D1**

Sample Identification		20242-1075 (Dup)	20242-1076	20242-1077	20242-1078	20242-1079
Location Code		MSC-D1-SB07	MSC-D1-SB07	MSC-D1-SB08	MSC-D1-SB08	MSC-D1-SB08
Date Sampled		12/09/99	12/09/99	12/09/99	12/09/99	12/09/99
Depth (feet below ground surface)		10.5	20.0	5.0	10.0	20.0
	Unit					
<b>CA LUFT 8015M</b>						
TPH as Diesel	mg/kg	12 U	11 U	12 U	10 U	12 U
TPH as Gasoline	mg/kg	1.2 U	1.1 U	1.2 U	1 U	1.2 U
<b>EPA 8260A</b>						
1,1,1-Trichloroethane	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
1,1,2,2-Tetrachloroethane	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
1,1,2-Trichloroethane	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
1,1-Dichloroethane	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
1,1-Dichloroethene	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
1,2-Dichloroethane	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
1,2-Dichloropropane	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
2-Butanone (MEK)	µg/kg	58 U	56 U	58 U	52 U	58 U
2-Chloroethyl vinyl ether	µg/kg	58 UJ	56 UJ	58 UJ	52 UJ	58 UJ
2-Hexanone	µg/kg	58 UJ	56 UJ	58 UJ	52 UJ	58 UJ
4-Methyl-2-pentanone (MIBK)	µg/kg	58 U	56 U	58 U	52 U	58 U
Acetone	µg/kg	58 U	56 U	58 U	52 U	58 U
Benzene	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Bromodichloromethane	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Bromoform	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Bromomethane	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Carbon disulfide	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Carbon tetrachloride	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Chlorobenzene	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Chloroethane	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Chloroform	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Chloromethane	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
cis-1,2-Dichloroethene	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
cis-1,3-Dichloropropene	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Dibromochloromethane	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Ethylbenzene	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Methyl tert-butyl ether (MTBE)	µg/kg	12 U	11 U	12 U	10 U	12 U
Methylene chloride	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Styrene	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U

**Table 3-1****Summary of Analytical Results for Soil Samples — Site MSC D1**

Sample Identification		20242-1075 (Dup)	20242-1076	20242-1077	20242-1078	20242-1079
Location Code		MSC-D1-SB07	MSC-D1-SB07	MSC-D1-SB08	MSC-D1-SB08	MSC-D1-SB08
Date Sampled		12/09/99	12/09/99	12/09/99	12/09/99	12/09/99
Depth (feet below ground surface)		10.5	20.0	5.0	10.0	20.0
	Unit					
Tetrachloroethene	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Toluene	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
trans-1,2-Dichloroethene	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
trans-1,3-Dichloropropene	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Trichloroethene	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Vinyl acetate	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Vinyl chloride	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U
Xylenes (total)	µg/kg	5.8 U	5.6 U	5.8 U	5.2 U	5.8 U

### **Table 3-1**

### **Summary of Analytical Results for Soil Samples — Site MSC D1**

**Explanation:**

CA LUFT - California Leaking Underground Fuel Tank

EPA - United States Environmental Protection Agency

J - estimated

M - Modified

MDL - method detection limit

mg/kg - milligrams per kilogram

OHM - OHM Remediation Services Corp.

R - quality control indicates the data is not usable.

RL - reporting limit

SB - soil boring

TPH - total petroleum hydrocarbons

U - not detected above or equal to the stated reporting limit

µg/kg - micrograms per kilogram

UJ - the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.

**Table 3-2**  
**Summary of Analytical Results for Field QC Samples — Site MSC D1**

Sample Identification		20242-1053	20242-1080
Location Code		Trip Blank	Equipment Rinsate
Date Sampled		12/09/99	12/09/99
	Unit		
<b>CA LUFT 8015M</b>			
TPH as Diesel	mg/L	NA	.097 U
TPH as Gasoline	mg/L	NA	.1 U
<b>EPA 8260A</b>			
1,1,1-Trichloroethane	µg/L	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	5 U	5 U
1,1,2-Trichloroethane	µg/L	5 U	5 U
1,1-Dichloroethane	µg/L	5 U	5 U
1,1-Dichloroethene	µg/L	5 U	5 U
1,2-Dichloroethane	µg/L	5 U	5 U
1,2-Dichloropropane	µg/L	5 U	5 U
2-Butanone (MEK)	µg/L	50 U	50 U
2-Chloroethyl vinyl ether	µg/L	50 U	50 U
2-Hexanone	µg/L	50 U	50 U
4-Methyl-2-pentanone (MIBK)	µg/L	50 U	50 U
Acetone	µg/L	50 UJ	50 U
Benzene	µg/L	5 U	5 U
Bromodichloromethane	µg/L	5 U	5 U
Bromoform	µg/L	5 U	5 U
Bromomethane	µg/L	5 U	5 U
Carbon disulfide	µg/L	5 U	5 U
Carbon tetrachloride	µg/L	5 U	5 U
Chlorobenzene	µg/L	5 U	5 U
Chloroethane	µg/L	5 U	5 U
Chloroform	µg/L	5 U	5 U
Chloromethane	µg/L	5 U	5 U
cis-1,2-Dichloroethene	µg/L	5 U	5 U
cis-1,3-Dichloropropene	µg/L	5 U	5 U
Dibromochloromethane	µg/L	5 U	5 U
Ethylbenzene	µg/L	5 U	5 U
Methyl tert-butyl ether (MTBE)	µg/L	10 U	10 U
Methylene chloride	µg/L	5 U	5 U
Styrene	µg/L	5 U	5 U
Tetrachloroethene	µg/L	5 U	5 U

**Table 3-2**  
**Summary of Analytical Results for Field QC Samples — Site MSC D1**

Sample Identification		20242-1053	20242-1080
Location Code		Trip Blank	Equipment Rinsate
Date Sampled		12/09/99	12/09/99
	Unit		
Toluene	µg/L	5 U	5 U
trans-1,2-Dichloroethene	µg/L	5 U	5 U
trans-1,3-Dichloropropene	µg/L	5 U	5 U
Trichloroethene	µg/L	5 U	5 U
Vinyl acetate	µg/L	50 U	50 U
Vinyl chloride	µg/L	5 U	5 U
Xylenes (total)	µg/L	5 U	5 U

Explanation:

CA LUFT - California Leaking Underground Fuel Tank

EPA - United States Environmental Protection Agency

J - estimated

M - Modified

MDL - method detection limit

mg/L - milligrams per liter

NA - not analyzed

OHM - OHM Remediation Services Corp.

R - quality control indicates the data is not usable.

RL - reporting limit

SB - soil boring

TPH - total petroleum hydrocarbons

U - not detected above or equal to the stated reporting limit

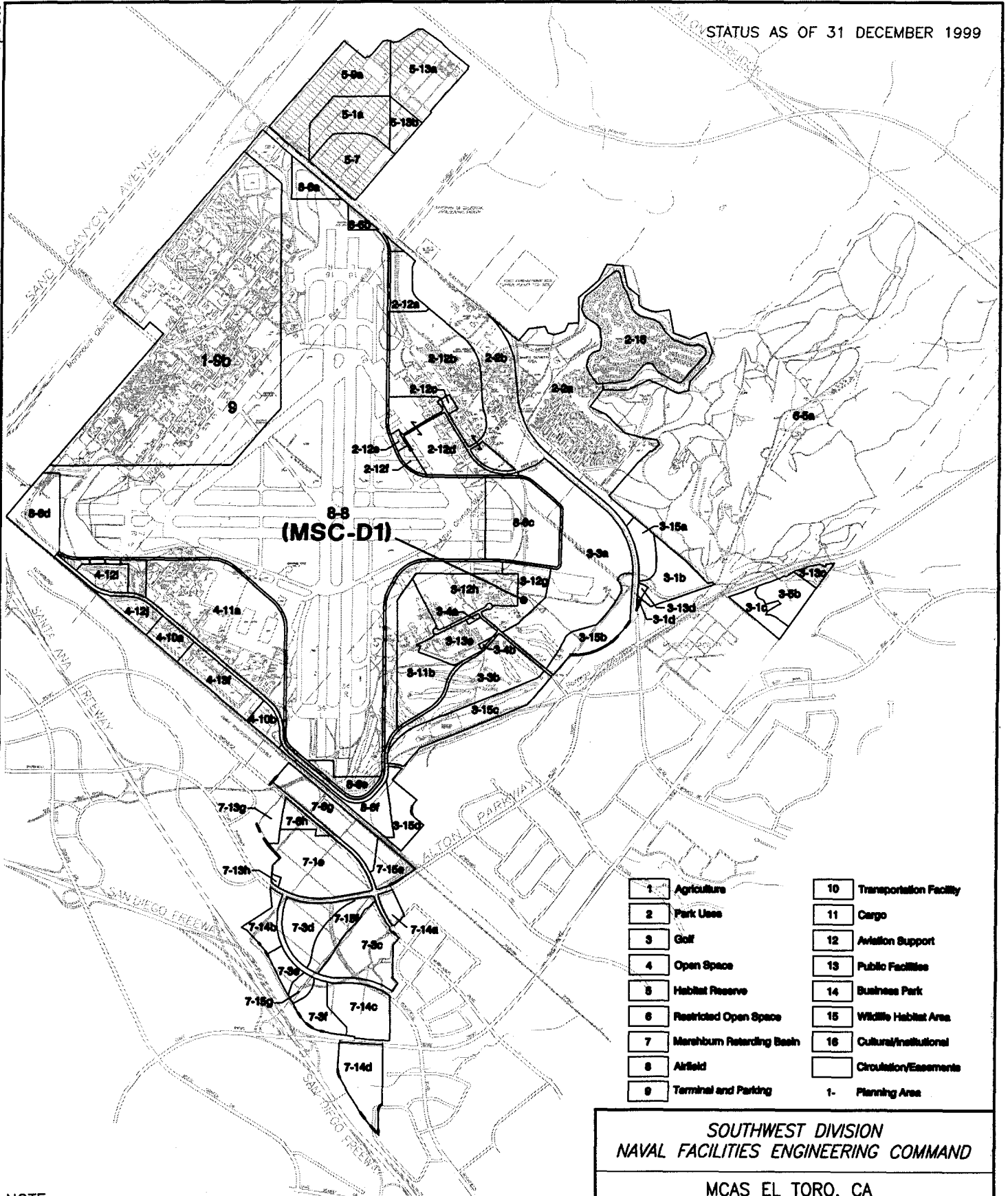
µg/L - micrograms per liter

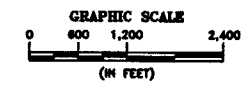
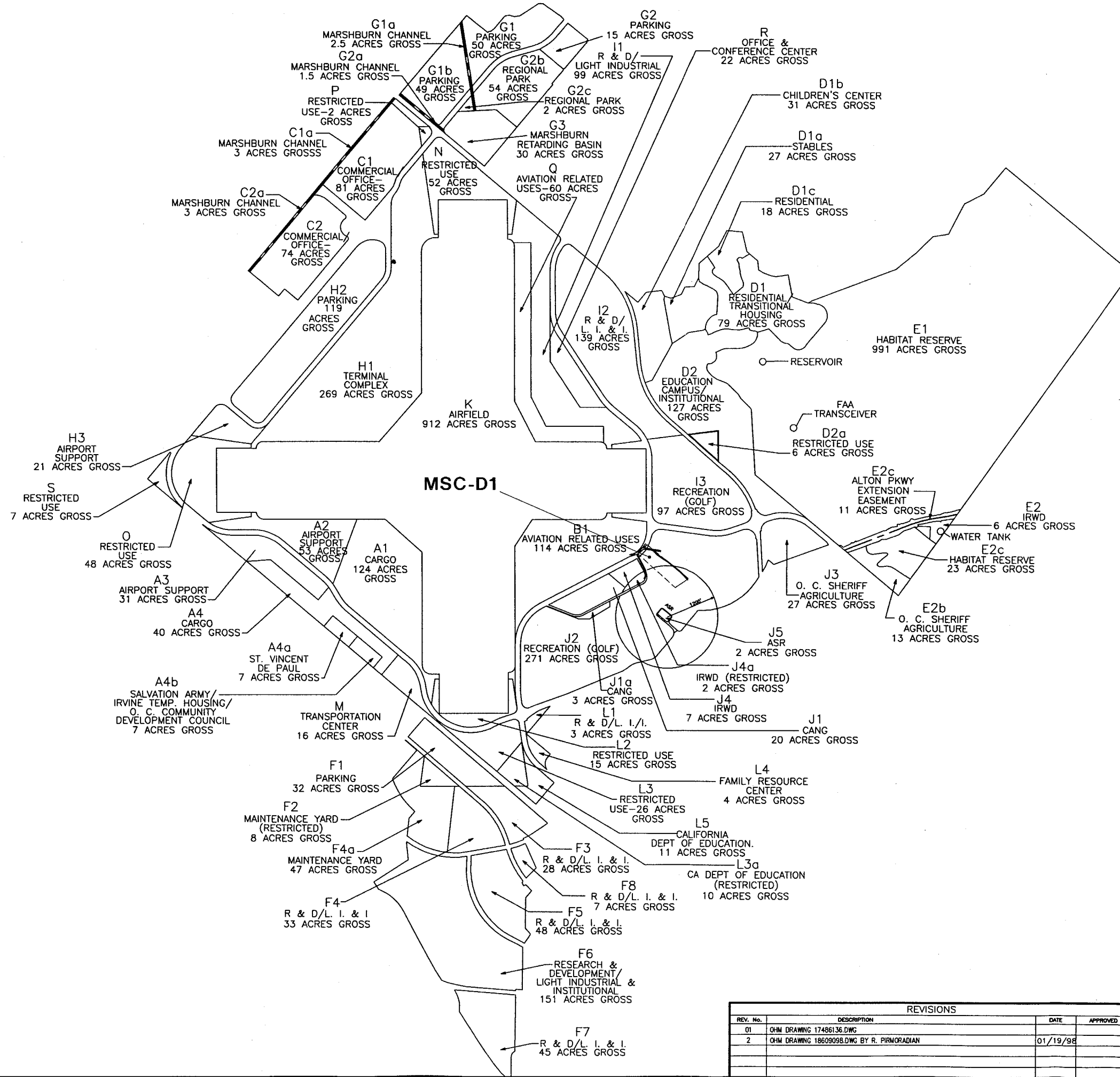
UJ - the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.



***Appendix A***

***Tentative Reuse Parcel Location of MSC D1***

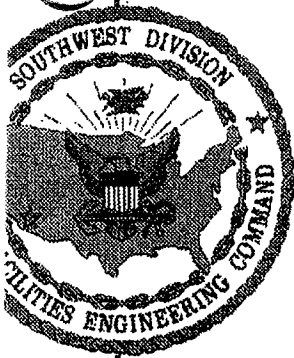




REVISIONS			
REV. No.	DESCRIPTION	DATE	APPROVED
01	OHM DRAWING 17486136.DWG		
2	OHM DRAWING 18609098.DWG BY R. PIRMORADIAN	01/19/98	

PROJECT		SWDIV		OHM Remediation Services Corp. A Subsidiary of OHM Corporation SAN DIEGO, CA	
DRAWN BY	DATE	EL TORO COMMUNITY REUSE PLAN			
R. PIRMORADIAN	2/22/2000	1997 WORKING MAP LAND USES/			
CHECKED BY	DATE	CONVEYANCES GROSS ACRES			
APPROVED BY	DATE	MSC-D1			
PROJECT MANAGER	DATE	MARINE CORPS AIR STATION			
AUTOCAD FILE No.		EL TORO, CALIFORNIA			
20242158.DWG					
SCALE	SHEET	OF	DOCUMENT CONTROL No.	OHM PROJECT No.	DRAWING No.
1"=2,400'	1	1	SW7995	20242	FIG A-1

***Appendix B***  
***Excerpts From JEG EBS Report***



**MARINE CORPS AIR STATION EL TORO  
EL TORO, CALIFORNIA  
INSTALLATION RESTORATION PROGRAM  
FINAL ENVIRONMENTAL  
BASELINE SURVEY REPORT**

**01 APRIL 1995**

**REVISION 0**

northernmost portion of the Station. The second pesticide storage area located in the southernmost portion of the Station, which is leased by Magarro Farms. Both of these storage areas were included in the Confirmation Sampling Program performed at the Station in late 1994 (refer to Section 5.0 for a summary of the sampling results).

**Fire Training Burn Pits.** The Station has two concrete-lined burn pits located adjacent to IRP Site 16 (Crash Crew Pit No. 2). Both pits were constructed in 1988, but only one is currently used. The western burn pit was only used one time. It was then retired (i.e., left in place) because the builder used an improper type of concrete that deteriorated during the initial burn event; however, no significant cracks are evident in the floor of the pit. Burns typically last 3 to 10 minutes and are conducted approximately 4 to 6 times per month. Only JP-5 is burned in the remaining pit.

**Silver Recovery Units.** Silver recovery units are used in the Station's general photography laboratory (Building 443) and medical clinic (Building 439). The silver recovery units currently in Building 443 were formerly located in Building 312 (moved in 1988). All three of these buildings are identified as LOCs.

MSCDI.

**Drum Storage Area.** During a routine site visit to MCAS El Toro in 1991, the Jacobs Team discovered a drum storage area located in the southeast quadrant of the Station, east of DRMO Storage Yard No. 3. The storage area contained hazardous waste that was generated overseas during Desert Storm

operations in the Middle East and shipped to MCAS El Toro for eventual disposal. The storage area measured approximately 1 to 2 acres. It consisted of several mostly unpaved storage cells with approximately 6- to 12-inch earthen berms surrounding each storage cell; waste containers were stored on top of plastic sleeting. The storage area existed from approximately August to November 1991 before the waste was transported off-Station. Types of wastes included lubricants, adhesives, paints, and cleaning compounds.

### **3.1.8 Aerial Photograph Features/Anomalies**

Two primary aerial photograph evaluations that address the historical land use and environmental condition of property at MCAS El Toro have been performed. They include:

- o U.S. Environmental Protection Agency (EPA). November 1991. *Site Analysis El Toro MCAS, Orange County, California.*
- o Science Applications International Corporation (SAIC). August 1993. *Final Report, Aerial Photograph Assessment, MCAS El Toro, Final Report, 1993.*

The EPA evaluation was performed in support of the IRP at MCAS El Toro and evaluations focus on Station's IRP sites. The photographs were at scales (e.g., 1:5,100; 1:8,000; etc.) that enabled detailed feature analysis. The evaluation covered the period between 1938 and 1991.

***Appendix C***  
***Excerpts From JEG RFA Report***




**MARINE CORPS AIR STATION EL TORO  
EL TORO, CALIFORNIA  
INSTALLATION RESTORATION PROGRAM  
FINAL RESOURCE CONSERVATION  
AND RECOVERY ACT (RCRA)  
FACILITY ASSESSMENT REPORT**

**PREPARED BY:**  
Southwest Division, Naval Facilities  
Engineering Command  
1220 Pacific Highway  
San Diego, California 92132-5190

**THROUGH:**  
CONTRACT #N68711-89-D-9296  
CTO #193  
DOCUMENT CONTROL NO:  
CLE-C01-01F193-S2-0001

**WITH:**  
Jacobs Engineering Group, Inc.  
3655 Nobel Drive, Suite 200  
San Diego, California 92122

In association with:  
International Technology Corporation  
CH2M HILL

  
Mike Arends, P.E.  
CLEAN Project Manager  
CH2M HILL, Inc.  
7/16/93  
Date

  
Raoul Portillo  
CLEAN Technical Reviewer  
Jacobs Engineering Group Inc.  
15 July 1993  
Date

**Evaluation Form  
SWMU/Area of Concern  
Number 264**

Name: DRMO Storage Yard #3

Location: North 3rd St and East Marine Way

Size: Approximately 3 acres

Date of Site Visit: 02 May 1991



Period of Operation

Currently active

**Evaluation Form  
SWMU/Area of Concern  
Number 264**

Unit Characteristics

DRMO Storage Yard #3 is located on the southeast corner of North 3rd Street and East Marine Way. The entrance to the storage yard is located at the southern corner of the site. The storage yard is used to store miscellaneous items and equipment including tires, automobiles, refrigerators and other appliances. The entire area of the storage yard is unpaved with a thin layer of gravel over most of the surface. There is little or no vegetation within the lot. The perimeter of the lot is enclosed with chain-link fencing. The storage yard is bordered on the southwest side by North 3rd Street and on the remaining sides by unpaved areas.

Several areas of darkly stained soil were observed in the storage yard. The most significant stain was located in the central portion of the storage yard near the jeep storage area. Other stains were observed in the storage yard at the north corner, the west corner near the tire storage area, and the southeast side near the appliance storage area. The stains appeared to be crankcase oil.

Waste Characteristics

Waste oil

Possible Migration Pathways

Surface Soil

Evidence of Release

Areas of stained soil observed throughout the storage yard

Exposure Potential

Authorized on-Station personnel

Recommendations

A sampling visit is recommended for this storage yard.

**Evaluation Form  
SWMU/Area of Concern  
Number 181**

Name: Landfarming Site

Location: Adjacent to DRMO Storage Yard #3, near Building 673

Size: Approximately 3 acres

Date of Site Visit: 02 May 1991



Period of Operation

Currently active

**Evaluation Form  
SWMU/Area of Concern  
Number 181**

Unit Characteristics

A landfarming area for remediating petroleum-contaminated soil was identified near Building 673 through interviews with current on-Station personnel. The landfarming area is located east of Building 673, adjacent to the southeastern corner of DRMO Storage Yard #3, and is paved. The landfarming area consists of various piles of soil, approximately 4 to 6 ft in height. There are two main piles, divided to the north and south by a dirt road extending east from "Z" Street. The piles consist of dirt, broken asphalt and concrete chunks, sand, and gravel. Miscellaneous garbage is also mixed in the soil piles. The piles support sparse vegetative growth.

Waste Characteristics

Petroleum-contaminated soil

Possible Migration Pathways

Surface soil

Evidence of Release

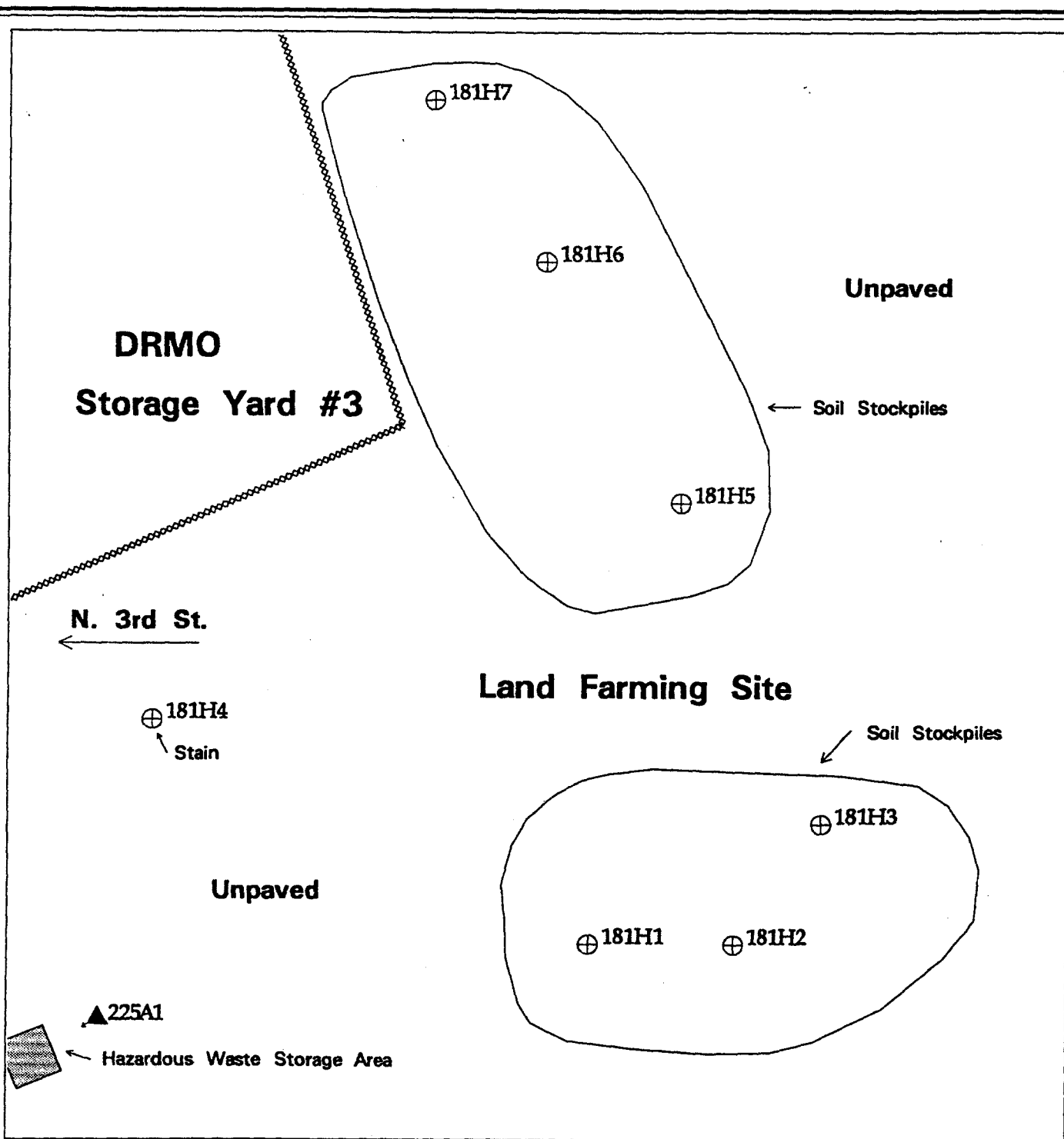
None observed

Exposure Potential

On-Station personnel

Recommendations

Although there is no current evidence of a release at the landfarming site, it is not known whether a release may have occurred in the past. A sampling visit is recommended for this site.



**Figure 56 Sample Location Map**

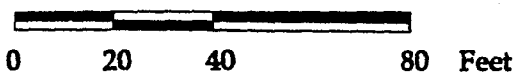
**Boring Location and Number:**

- ⊕ 123H4 5' Deep Boring
- ⊙ 123B4 25' Deep Boring
- ▲ 123A4 60' Long, Angle Boring

**Features:**

- ▬ Building
- ▬ Concrete
- ⋯ Fence
- ++++ Railroad

Scale



**SWMU/AOC Number and Type:**

181 - Landfarming Area

225 - Hazardous Waste Storage Area

MCAS El Toro  
RCRA Facility Assessment

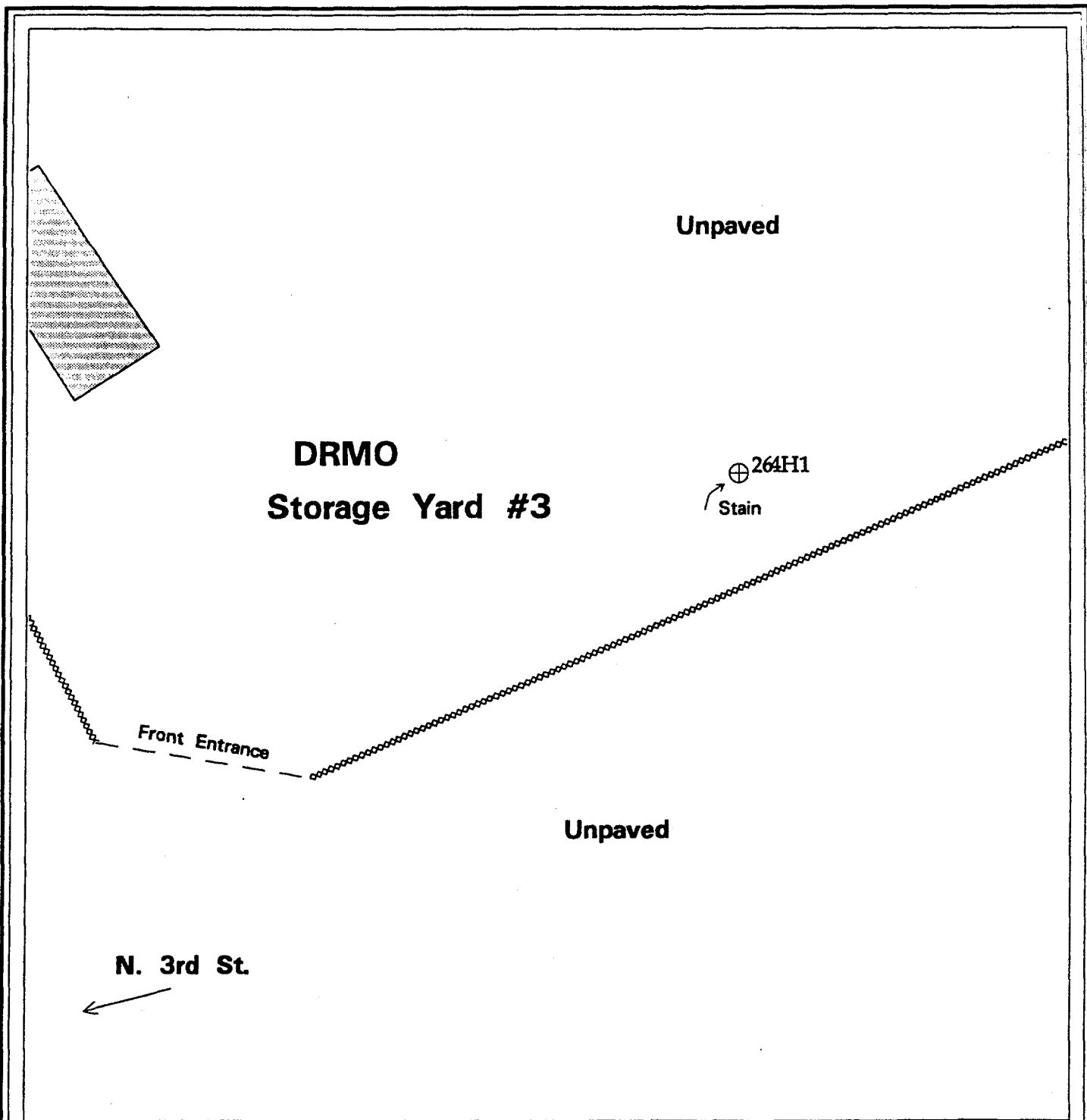
**MCAS EL TORO RCRA FACILITY ASSESSMENT – SAMPLING VISIT RESULTS**

SWMU/AOC NUMBER	SWMU/AOC TYPE (FIGURE)	BORING NUMBER	SAMPLE DEPTH (FEET)	ANALYTICAL TEST RESULTS								RECOMMENDATIONS	
				TPH (mg/kg)	TFH (mg/kg)		VOCs (ug/kg)	SVOCs (ug/kg)	PESTICIDES/PCBs (ug/kg)	METALS (mg/kg)			
					Gasoline	Diesel					Action	Rationale	
181	Landfarming Site (56)	H1	2	NA	ND	ND	Methylene Chloride-1 BJ * Acetone-8 BJ * Toluene-1 J	NA	NA	NA	NFA	TPH/TFH < 1000 ppm VOCs < CRDL  CRDL - Contract Required Detection Limit	
			5	NA	ND	ND	Methylene Chloride-4 BJ * Acetone-9 BJ *	NA	NA	NA			
		H2	2	NA	ND	ND	Methylene Chloride-1 BJ * Acetone-12 B * Toluene-1 J	NA	NA	NA			
			5	NA	ND	ND	ND	NA	NA	NA			
			5 (Duplicate)	NA	ND	ND	Methylene Chloride-1 BJ * Acetone-6 BJ *	NA	NA	NA			
		H3	2	NA	ND	ND	Methylene Chloride-1 BJ * Acetone-16 B * Toluene-1 J	NA	NA	NA			
			5	NA	ND	ND	Methylene Chloride-1 BJ * Acetone-23 B * Toluene-2 J	NA	NA	NA			
		H4	2	NA	ND	ND	Methylene Chloride-1 BJ * Acetone-15 B * Toluene-2 J	NA	NA	NA			
			5	NA	ND	ND	Methylene Chloride-1 BJ * Acetone-10 BJ *	NA	NA	NA			

**MCAS EL TORO RCRA FACILITY ASSESSMENT - SAMPLING VISIT RESULTS**

SWMU/AOC NUMBER	SWMU/AOC TYPE (FIGURE)	BORING NUMBER	SAMPLE DEPTH (FEET)	ANALYTICAL TEST RESULTS							RECOMMENDATIONS	
				TPH (mg/kg)	TFH (mg/kg)		VOCs (ug/kg)	SVOCs (ug/kg)	PESTICIDES/PCBs (ug/kg)	METALS (mg/kg)		
					Gasoline	Diesel					Action	Rationale
181	Landfarming Site (56)	H5	3	NA	ND	ND	Methylene Chloride-2 BJ * Acetone-26 B * Toluene-2 J	NA	NA	NA	NFA	TPH/TFH < 1000 ppm VOCs < CRDL  CRDL - Contract Required Detection Limit
			7	NA	ND	ND	Acetone-15 B *	NA	NA	NA		
		H6	2	NA	ND	ND	Methylene Chloride-4 BJ * Acetone-14 B * Toluene-1 J	NA	NA	NA		
			5	NA	ND	ND	Methylene Chloride-1 BJ * Acetone-11 B * Toluene-1 J Xylene-2 J	NA	NA	NA		
		H7	2	NA	300 Z	ND	Acetone-18 B * Toluene-2 J PCE-2 J Xylene-2 J	NA	NA	NA		
			5	NA	ND	ND	Methylene Chloride-1 BJ * Acetone-7 BJ * 2-Butanone-3 J	NA	NA	NA		









**Figure 80 Sample Location Map**

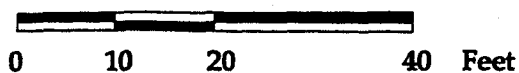
**Boring Location and Number:**

- ⊕ 123H4 5' Deep Boring
- 123B4 25' Deep Boring
- ▲ 123A4 60' Long, Angle Boring

**Features:**

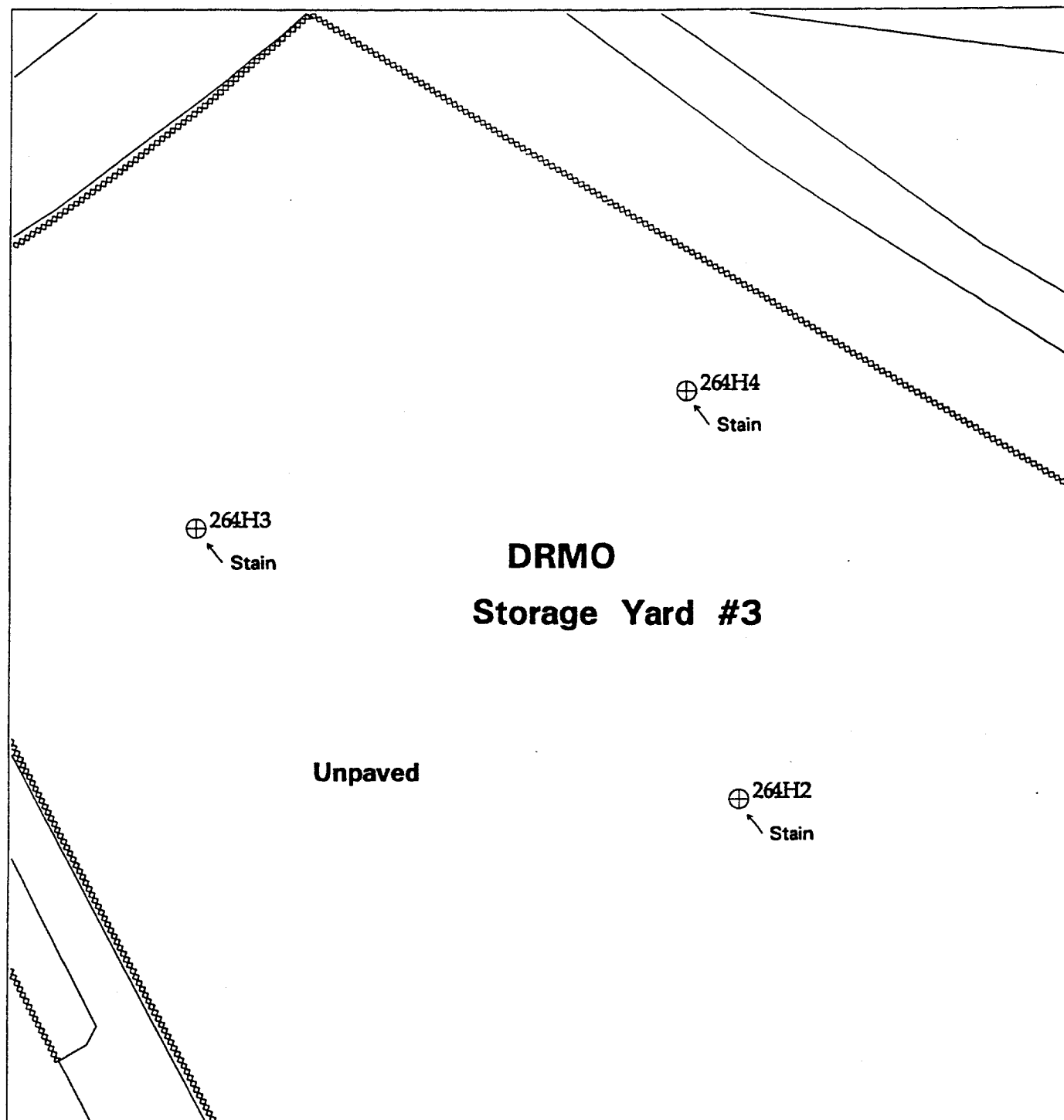
-  Building
-  Concrete
-  Fence
-  Railroad

**Scale**



**SWMU/AOC Number and Type:**  
264 - Equipment Storage Area

**MCAS El Toro**  
**RCRA Facility Assessment**



**Figure 81 Sample Location Map**

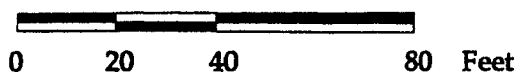
**Boring Location and Number:**

- ⊕ 123H4 5' Deep Boring
- 123B4 25' Deep Boring
- ▲ 123A4 60' Long, Angle Boring

**Features:**

- Building
- Concrete
- Fence
- Railroad

**Scale**



**SWMU/AOC Number and Type:**

264 - Equipment Storage Area

MCAS El Toro  
RCRA Facility Assessment

# MCAS EL TORO RCRA FACILITY ASSESSMENT – SAMPLING VISIT RESULTS

MCAS EL TORO RCRA FACILITY ASSESSMENT -- SAMPLING VISIT RESULTS												
SWMU/AOC NUMBER	SWMU/AOC TYPE (FIGURE)	BORING NUMBER	SAMPLE DEPTH (FEET)	ANALYTICAL TEST RESULTS							RECOMMENDATIONS	
				TPH (mg/kg)	TFH (mg/kg)		VOCs (ug/kg)	SVOCs (ug/kg)	PESTICIDES/PCBs (ug/kg)	METALS (mg/kg)		
					Gasoline	Diesel					Action	Rationale
264	Equipment Storage Area (80, 81)	H1	2	33	NA	NA	Toluene-1 J	NA	NA	NA	NFA	TPH/TFH < 1000 ppm VOCs < CRDL
			5	47	NA	NA	PCE-1 J Xylene-2 J	NA	NA	NA		
		H2	2	65	NA	NA	ND	NA	NA	NA		
			5	ND	NA	NA	ND	NA	NA	NA		
		H3	2	34	NA	NA	Methylene Chloride-5 BJ * Acetone-9 BJ * Toluene-1 J	NA	NA	NA		
			2 (Duplicate)	490	NA	NA	Methylene Chloride-5 BJ * Acetone-13 B *	NA	NA	NA		
			5	290	NA	NA	Acetone-10 BJ * Toluene-1 J	NA	NA	NA		
		H4	2	ND	NA	NA	Methylene Chloride-4 BJ * Acetone-5 BJ *	NA	NA	NA		
			5	ND	NA	NA	Methylene Chloride-5 BJ * Acetone-8 BJ * 2-Butanone-3 J	NA	NA	NA		

**SUMMARY OF SAMPLING VISIT RESULTS**  
**MCAS EL TORO RFA**

SWR#	DESCRIPTION	TPH/TFH and Volatiles						SVOCs			PESTICIDES/PCBs			METALS			RECOMMENDATIONS
		TPH/TFH < 100 ppm	TPH/TFH < 1000 ppm	TPH/TFH > 1000 ppm	VOC < CRDL	VOC < ETM & PRG	VOC > ETM & PRG	< CRDL	< ETM & PRG	> ETM & PRG	< CRDL	< ETM & PRG	> ETM & PRG	< BOT	< ETM & PRG	> ETM & PRG	
125	Hazardous Waste Storage Area	X			X			X			X			X			No Further Action
129	Underground Storage Tank	X				X		NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
130	Drum Storage Area	X			X			X			X				X		No Further Action
131	Engine Test Cell		X		X				X		X				X		Shallow soil borings.
132	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
137	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
138	Drum Storage Area	X			X			X			X			X			No Further Action
139	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
144	Drum Storage Area	X			X			X			X			X			No Further Action
145	Underground Storage Tank			X		X		NA	NA	NA	NA	NA	NA	NA	NA	NA	Additional borings.
147	Drum Storage Area		X		X			X			X			X			No Further Action
148	Drum Storage Area	X			X				X		X				X		No Further Action
151	Oil/Water Separator		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	Leak test/inspection of separator
152	Hazardous Waste Storage Area	X			X				X		X			X			No Further Action
152	Underground Storage Tank	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
154	Vehicle Wash Rack		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
171	Hazardous Waste Storage Area	X			X				X		X				X		Shallow Soil Borings
172	Hazardous Waste Storage Area	X			X			X			X				X		No Further Action
173	Oil/Water Separator			X		X		NA	NA	NA	NA	NA	NA	NA	NA	NA	Additional borings.
175	Underground Storage Tank			X			X	NA	NA	NA	NA	NA	NA	NA	NA	NA	Additional borings.
179	Underground Storage Tank			X		X		NA	NA	NA	NA	NA	NA	NA	NA	NA	Additional borings.
179	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
181	Landfilling Area		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
185	Hazardous Waste Storage Area	X			X			X			X			X			No Further Action
187	Underground Storage Tank/Oil Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
188	Underground Storage Tank/Oil Water Separator		X			X		NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
189	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
194	Former Incinerator Site			X			X	X			X				X		Further invest. under RUVS program
195	Vehicle Wash Rack	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
199	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
199	Vehicle Wash Rack		X			X		NA	NA	NA	NA	NA	NA	NA	NA	NA	Repair cracks in pavement.
199	Oil/Water Separator		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	Leak test/inspection of separator
201	Vehicle Wash Rack			X	X			NA	NA	NA	NA	NA	NA	NA	NA	NA	Repair cracks in pavement.
202	Underground Storage Tank	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
204	Vehicle Wash Rack			X		X		NA	NA	NA	NA	NA	NA	NA	NA	NA	Repair cracks in pavement.
205	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
206	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
211	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
213	Vehicle Wash Rack		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	Repair cracks in pavement.
214	Underground Storage Tank	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
220	Oil/Water Separator		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
222	Hazardous Waste Storage Area	X			X			X			X			X			No Further Action
223	Hazardous Waste Storage Area	X			X				X		X				X		No Further Action
224	Hazardous Waste Storage Area	X			X			X			X			X			No Further Action
225	Hazardous Waste Storage Area		X		X			X			X			X			No Further Action
226	Hazardous Waste Storage Area	X			X				X		X			X			No Further Action
227	Hazardous Waste Storage Area	X			X			X			X				X		No Further Action

## SUMMARY - SAMPLING VISIT RESULTS

## MCAS EL TORO RFA

SWMU/AOC	DESCRIPTION	TPH/TFH and Volatiles						SVOCs			PESTICIDES/PCBs			METALS			RECOMMENDATIONS
		TPH/TFH < 100 ppm	TPH/TFH < 1000 ppm	TPH/TFH > 1000 ppm	VOC < CRDL	VOC < ETM & PRG	VOC > ETM & PRG	< CRDL	< ETM & PRG	> ETM & PRG	< CRDL	< ETM & PRG	> ETM & PRG	< BGT	< ETM & PRG	> ETM & PRG	
229	Hazardous Waste Storage Area	X			X			X			X			X			No Further Action
231	Underground Storage Tank		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
232	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
233	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
234	Hazardous Waste Storage Area	X			X			X			X				X		No Further Action
241	Drum Storage Area		X		X			X			X				X		No Further Action
242	Hazardous Waste Storage Area	X			X			X			X				X		No Further Action
243	Wash Rack	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
244	PCB Spill Area	X			X			NA	NA	NA			X	NA	NA	NA	No Further Action
248	Oil/Water Separator		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
249	Underground Storage Tank	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
250	Underground Storage Tank		X			X		NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
252	Hazardous Waste Storage Area	X			X			X				X			X		No Further Action
253	Wash Rack	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
256	Hazardous Waste Storage Area	X			X			X			X			X			No Further Action
258	Hazardous Waste Storage Area	X			X			X			X			X			No Further Action
257	Wash Water Runoff Site	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
258	Wash Water Runoff Site	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
260	Above Ground Storage Tank		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	Repair cracks in pavement.
261	Drum Storage Area	X			X			X			X				X		No Further Action
262	Fuel Storage Area	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
263	Underground Storage Tank	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
264	Equipment Storage Area		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
266	Metal Plating Sewer Lines		X		X			X				X				X	No Further Action
268	Fuel Storage Locker		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
270	Wash Rack	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
271	Hazardous Waste Storage Area	X			X				X		X				X		No Further Action
272	Hazardous Waste Storage Area	X			X			X			X				X		No Further Action
273	Wash Rack	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
276	Underground Storage Tank	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
276	Underground Storage Tank		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
277	Underground Storage Tank			X		X		NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
278	Underground Storage Tank	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
279	Underground Storage Tank	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
280	Underground Storage Tank			X		X		NA	NA	NA	NA	NA	NA	NA	NA	NA	Additional borings
282	Underground Storage Tank	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
283	Underground Storage Tank	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
286	Underground Storage Tank		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
287	Underground Storage Tank	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
281	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
286	Oil/Water Separator	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
290	Underground Storage Tank			X		X		NA	NA	NA	NA	NA	NA	NA	NA	NA	Leak test/inspection of UST.
300	Spill Area East of SWMU/AOC 194			X	X				X		X				X		Further Invest. under RI/FS program
301	Mark Arrest System		X		X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
302	Mark Arrest System	X			X			NA	NA	NA	NA	NA	NA	NA	NA	NA	No Further Action
303	Underground Storage Tank	X			X			X			X			X			No Further Action

***Appendix D***  
***Site Inspection Log***

SITE ASSESSMENT LOG  
MCAS El Toro  
REMEDATION OF VARIOUS UST SITES  
20242, D.O. 112

MSC  
UST SITE: MSC D1

Field Observations by: D. Rawal

Date: 12/2/99

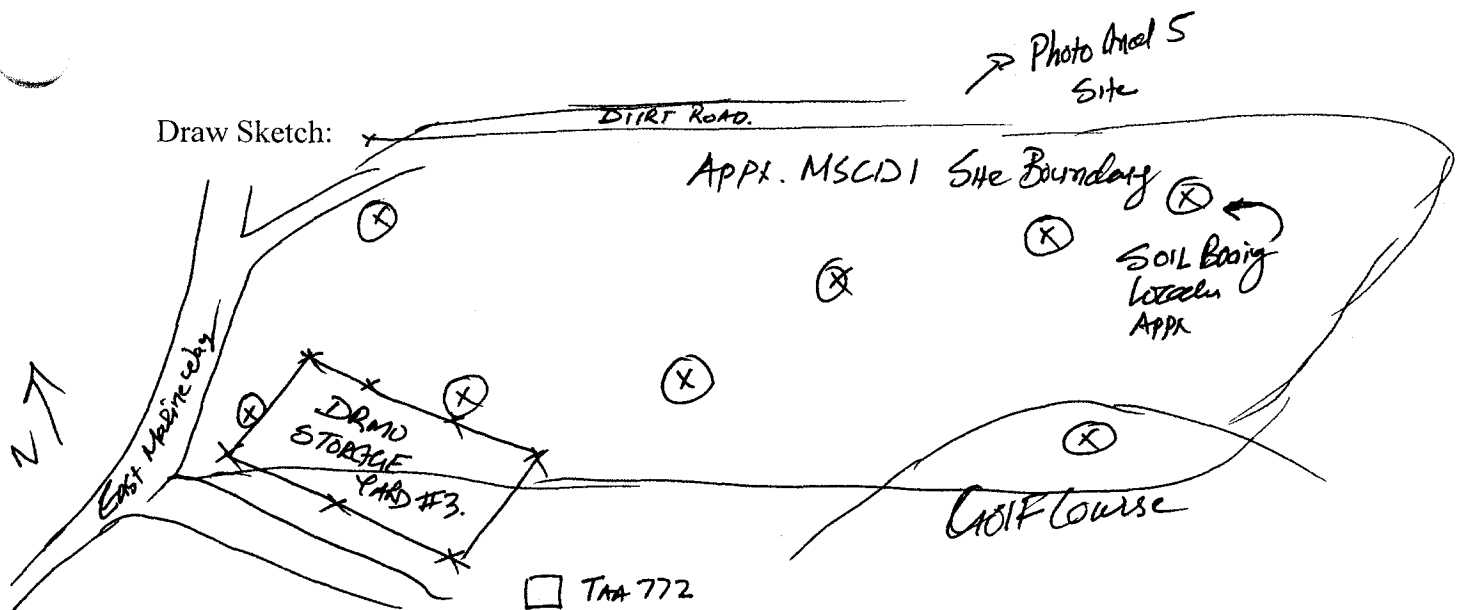
~~Former UST~~ <sup>MSC</sup> area: Paved or Unpaved MSC D1 was a temporary material staging area for Desert Storm operation in Middle East, from Appx. Aug to NOV 1991.  
Paved: Concrete or Asphalt None  
Unpaved: Open dirt area Yes, weeds, Very close to unused Runway  
Any Visible Sprinkler System: Yes No

-Nearest Building or Structure Distance: DRMO Storage Yard Appx. 200 feet

-Any Underground Piping/Lines, or Transformer Observed: None

-Overhead Utility Lines/Poles: None

-Site Setup Constrains: None For Drilling



Additional Field Notes:

MSC D1 was temporary material staging area for war in Middle East. No hazardous waste were stored here. Also materials were placed on plastic sheets. Area is unpaved with weeds/vegetation. No stains or spills were observed.

***Appendix E***  
***Geophysical Survey Data***



# S P E C T R U M

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## Results of Subsurface Investigation

### Proposed Drilling Locations

MSCD-1 Site


Marine Corps Air Station El Toro  
Irvine, California

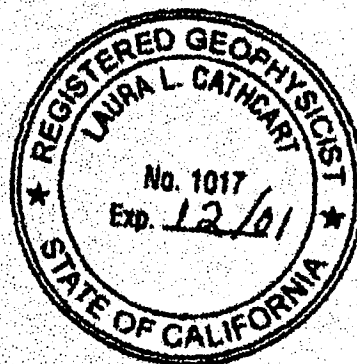
Prepared for: **OHM Remediation Corporation**  
Irvine, California

Date of Investigation: December 2, 1999

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### Prepared by:

  
\_\_\_\_\_  
Jim Foser  
Project Manager  
Spectrum Geophysics  
1220 Destree Road  
Escondido, CA 92027



Laura Cathcart  
Registered Geophysicist No. 1017

### Warranty:

Spectrum Geophysics was retained to conduct a subsurface investigation of the above facility to characterize the shallow subsurface. Our findings are subject to certain limitations due to site conditions and the instruments employed. We conducted this investigation in a manner consistent with our profession using similar methods. No other warranty as to the performance or deliverables is expressed or implied.

San Diego

Los Angeles

Irvine

[www.spectrum-geophysics.com](http://www.spectrum-geophysics.com)

## **Contents**

Introduction

Methods

Results and Conclusions

Figure 1	Area of Subsurface Investigation, Proposed Drilling Locations, MSCD-1 Site, SB-1 - SB-3, MCAS El Toro, Irvine, California
Figure 2	Area of Subsurface Investigation, Proposed Drilling Locations, MSCD-1 Site, SB-4 - SB-6, MCAS El Toro, Irvine, California
Figure 3	Area of Subsurface Investigation, Proposed Drilling Locations, MSCD-1 Site, SB-7 - SB-8, MCAS El Toro, Irvine, California
Appendix A	Base Utility Maps for MSCD-1 Site

**Results of Subsurface Investigation  
Proposed Drilling Locations  
MSCD-1 Site  
MCAS El Toro  
Irvine, California**

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**Introduction**

On December 2, 1999 Spectrum Geophysics conducted a subsurface investigation of the MSCD-1 Site at MCAS El Toro in Irvine, California. The purpose was to investigate 16 proposed drilling locations for detectable subsurface utilities. For ease of discussion, these locations will be referred to as proposed ground intrusion sites (PGIS).

---

**Methods**

The equipment used in this investigation consisted of a Fisher TW-6 shallow-focus terrain conductivity meter, a Dynatel 500A cable locator, a Radiodetection RD400 utility locator, and a GSSI SIR-3 ground penetrating radar (GPR) unit coupled to a 500-MHz antenna.

GPR and EM utility-locating methods were used in the vicinity of each PGIS to delineate the surface trace of detectable conduits and to identify buried objects having no surface expression. The following paragraphs discuss the methods used.

- 1) The area in the vicinity of each PGIS was investigated for detectable subsurface utilities or other buried features. Utilities which were exposed above ground in the vicinity of the area were directly connected to, traced out, and mapped on a site map (Figures 1, 2, and 3).
- 2) Each PGIS was investigated with a passive electromagnetic receiver tuned to 50/60 Hz, radio, and audio frequencies to detect buried utilities that might reradiate an electromagnetic field.
- 3) Each PGIS was investigated with two crew members operating a matched-frequency transmitter and receiver. We conducted bi-directional traverses to detect increases in signal strength which might suggest subsurface utilities. Each suspected signal increase was further investigated to discern a signal-propagating utility.
- 4) GPR data were collected from a total of 32 traverses (two perpendicular GPR traverses per PGIS location). Maps of these traverses are presented in Figures 1, 2, and 3. GPR data were produced in the form of vertical cross sections and interpreted in the field for anomalies whose signatures might indicate the presence of subsurface conduits or other features of interest.

signatures might indicate the presence of subsurface conduits or other features of interest.

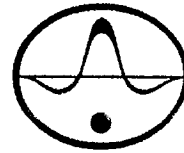
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**Results and Conclusions**

The surface trace of detected utilities in the vicinity of each PGIS was marked on the ground with spray paint using a color code established by the American Public Works Association or marked by wooden stakes with flagging ribbon. Site maps with geophysical interpretation of the areas investigated are presented in Figures 1, 2, and 3. Drilling and excavation activities should be kept a minimum of two feet away from detected utilities.

The penetration depth of the GPR signal was approximately 1-2 feet in the areas investigated. As a consequence, some subsurface utilities may not have been detected due to the shallow penetration of the GPR. Because of this limitation, Spectrum cannot guarantee that all nonmetallic conduits, such as sewers and pvc water lines, have been identified within the areas of investigation.

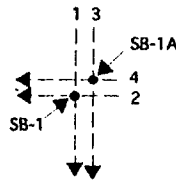
**FIGURE 1**  
**AREA OF SUBSURFACE INVESTIGATION**  
**PROPOSED DRILLING LOCATIONS**  
**MSCD-1 SITE, SB-1 - SB-3**  
**MCAS EL TORO**  
**IRVINE, CALIFORNIA**



**SPECTRUM**  
**GEOPHYSICS**

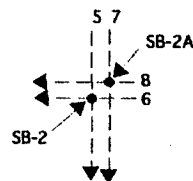
622 Glenoaks Boulevard, San Fernando, CA 91340

**SB-1, 1A**



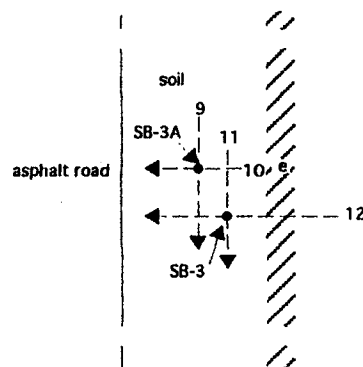
soil  
asphalt

**SB-2, 2A**



soil  
asphalt

**SB-3, 3A**



**EXPLANATION**

- 1 —▶ GPR traverse with number
- SB-3 • PGIS with number
- x— Chain-link fence

**CONDUITS**

- ///e/// Electric trench
- — — Trend Continues

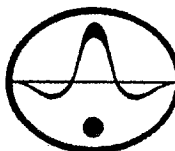


0 10 20  
 One inch equals  
 approximately 20 feet

Project Number: 9912022F  
 Date of Investigation:  
 December 2, 1999  
 Map by J. Proser

Not all below ground facilities may be represented on this map

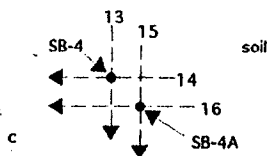
**FIGURE 2**  
**AREA OF SUBSURFACE INVESTIGATION**  
**PROPOSED DRILLING LOCATIONS**  
 MSCD-1 SITE, SB-4 - SB-6  
 MCAS EL TORO  
 IRVINE, CALIFORNIA



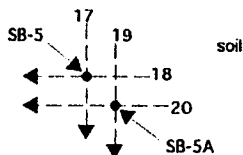
**SPECTRUM**  
**GEOPHYSICS**

622 Glenoaks Boulevard, San Fernando, CA 91340

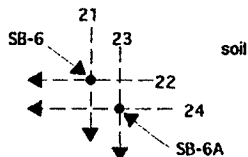
**SB-4, 4A**



**SB-5, 5A**



**SB-6, 6A**



**EXPLANATION**

15---▶ GPR traverse with number  
 • PGIS with number

**CONDUITS**

--- c --- Conduit  
 --- Trend Continues

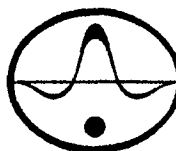


0 10 20  
 One inch equals  
 approximately 20 feet

Project Number: 9912022F  
 Date of Investigation:  
 December 2, 1999  
 Map by J. Pfoser

Not all below ground facilities may be represented on this map

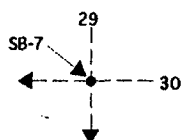
**FIGURE 3**  
**AREA OF SUBSURFACE INVESTIGATION**  
**PROPOSED DRILLING LOCATIONS**  
**MSCD-1 SITE, SB-7 - SB-8**  
**MCAS EL TORO**  
**IRVINE, CALIFORNIA**



**SPECTRUM**  
**GEOPHYSICS**

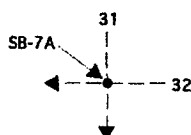
622 Glenoaks Boulevard, San Fernando, CA 91340

**SB-7, 7A**

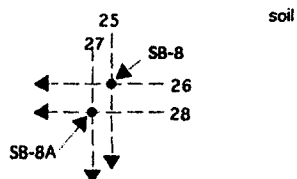


□ ← above-ground  
water valve

soil



**SB-8, 8A**



soil

**EXPLANATION**

25 — ► GPR traverse with number  
 SB-8 • PGIS with number



0 10 20  
 One inch equals  
 approximately 20 feet

Project Number: 9912022F  
 Date of Investigation:  
 December 2, 1999  
 Map by J. Pfoser

Not all below ground facilities may be represented on this map



***IT Corporation***

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*San Diego, CA 92101-8517*

*Tel. 619.239.1690*

*Fax. 619.239.1238*

*A Member of The IT Group*

Appendix A

Intentionally not submitted by IT Corporation.



***Appendix F***  
***Field Soil Boring Logs***

# Geologic Log of Boring MSC-D1-SB01

Project <b>MCAS/EL TORO</b>	Northing -	Drilling Company <b>BC2</b>	
Project Number <b>20242</b>	Easting -	Drill Rig <b>CME75</b>	Begin Drilling <b>12/9/99</b>
Client <b>SWDIV</b>	TOC Elevation -	Driller <b>Diego Torres</b>	End Drilling <b>12/9/99</b>
Location <b>DESERT STORM</b>	TOP OF RIM -	Drill Method <b>HSA</b>	Well Completion Date <b>12/9/99</b>
Geologist <b>B. Tanaka</b>	DIAGRAM NOT TO SCALE		
Borehole Diameter <b>8-INCHES</b>	Total Depth of Borehole <b>21 FEET</b>	Depth to Water	<b>NOT ENCOUNTERED</b>

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Soil surface: Hand augured to 4 feet bgs, 5 foot sample was collected, hand augured to 10 feet bgs.	0							
Silty Sands (SM): Pale brown (10YR 5/4), fine to coarse, subrounded to subangular sands, fine non plastic silts, slight moist to dry, no odor detected.	2				0			
	4	SM			0			
Silty Sand (SM): Yellow brown (10YR 5/4), very fine to fine sands, well sorted, medium dense, fine non plastic silts, slightly moist, no odor detected.	6				0	10	10	
<b>20242-1054 Sample collected at 5.0-5.5 feet bgs.</b>								
	8							
Sands (SP): Yellow brown (10YR 5/4), very fine to fine sands well sorted, medium dense, slightly moist, no odor detected.	10				0	10	10	
<b>20242-1055 Sample collected at 10.0-10.5 feet bgs.</b>								
	12	SP						
	14							
Silts (ML): Dark yellowish brown (10YR 5/4), fine slightly plastic, slightly moist.	16	ML			0	14	14	
Sands (SP): Light yellowish brown (10YR 5/4), fines, well sorted, medium dense, slightly moist, no odor detected.	18				0	14	14	
	20	SP						
Sands (SP): Yellow (2.5Y 5/4), fine, well sorted, medium dense, subrounded to subangular, slightly moist, no odor.	22				0	14	14	
<b>20242-1056 Sample collected at 20.0-20.5 feet bgs.</b>								
End of boring at 21 feet bgs. No groundwater was encountered in the boring. Boring was back filled with 4 (90lb) bags of cement mixed with 10 gallons of potable water.	24							
	26							
	28							
	30							
	32							
	34							
	36							
	38							
	40							

# Geologic Log of Boring MSC-D1-SB02

Project <b>MCAS/EL TORO</b>	Northing -	Drilling Company <b>BC2</b>	
Project Number <b>20242</b>	Easting -	Drill Rig <b>CME75</b>	Begin Drilling <b>12/9/99</b>
Client <b>SWDIV</b>	TOC Elevation -	Driller <b>Diego Torres</b>	End Drilling <b>12/9/99</b>
Location <b>DESERT STORM</b>	TOP OF RIM -	Drill Method <b>HSA</b>	Well Completion Date <b>12/9/99</b>
Geologist <b>B. Tanaka</b>	DIAGRAM NOT TO SCALE		
Borehole Diameter <b>8-INCHES</b>	Total Depth of Borehole <b>21 FEET</b>	Depth to Water	<b>NOT ENCOUNTERED</b>

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Soil surface: Hand augured to 4 feet bgs, 5 foot sample was collected, hand augured to 10 feet bgs.	0							
	2				0			
	4	SM			0			
Silty Sand (SM): Yellow brown (10YR 5/4), very fine to fine sands, well sorted, medium dense, fine slightly plastic silts, slightly moist, no odor detected.	6				0	15	100%	
<b>20242-1057 Sample collected at 5.0-5.5 feet bgs.</b>	8				0			
	10				0	15	100%	
Sands (SP): Yellow brown (10YR 5/4), fine sands, well sorted, medium dense, subrounded to subangular, slightly moist, no odor detected.	12				0			
<b>20242-1058 Sample collected at 10.0-10.5 feet bgs.</b>	14	SP			0			
	16				0			
	18				0			
	20				0	15	100%	
Sands (SP): Brownish yellow (10YR 5/4), very fine to fine, medium dense, well sorted, subrounded to subangular, slightly moist, no odor detected.	22				0			
<b>20242-1059 Sample collected at 20.0-20.5 feet bgs.</b>	24				0			
End of boring at 21 feet bgs. No groundwater was encountered in the boring. Boring was back filled with 4 (90lb) bags of cement mixed with 10 gallons of potable water.	26							
	28							
	30							
	32							
	34							
	36							
	38							
	40							



# Geologic Log of Boring MSC-D1-SB03

Project <b>MCAS/EL TORO</b>	Northing -	Drilling Company BC2	
Project Number <b>20242</b>	Easting -	Drill Rig CME75	Begin Drilling 12/9/99
Client SWDIV	TOC Elevation -	Driller Diego Torres	End Drilling 12/9/99
Location <b>DESERT STORM</b>	TOP OF RIM -	Drill Method HSA	Well Completion Date 12/9/99
Geologist B. Tanaka	DIAGRAM NOT TO SCALE		
Borehole Diameter 8-INCHES	Total Depth of Borehole 21 FEET	Depth to Water	NOT ENCOUNTERED

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PI/D/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Soil surface: Hand augured to 4 feet bgs, 5 foot sample was collected, hand augured to 10 feet bgs. Soil Sands (SM): Yellow brown (10YR 5/4), very fine to fine sands, well sorted, medium dense, fine non plastic silts, slightly moist to dry, no odor detected.	0							
	2	SM			0			
	4				0			
Sand (SP): Pink (7.5YR 5/4), well sorted, medium dense, fine sand. <b>20242-1060 Sample collected at 5.0-5.5 feet bgs.</b>	6				0	14		
	8	SP			0	17		
	10				0	21		
Silty Sands (SM): Dark yellowish brown (10YR 5/4), fine sands, medium dense, fine slightly plastic silts, slightly moist, no odor detected. <b>20242-1061 Sample collected at 10.0-10.5 feet bgs.</b>	12	SM			0	12		
	14				0	14		
	16				0	14		
Sands (SP): Pink (7.5YR 5/4), Well sorted, medium dense, fine sand, subrounded to subangular, slightly moist to moist, no odor detected.	18				0	11		
	20	SP			0	13		
	22				0	16		
Sands (SP): Light yellow brown (2.5Y 5/4), well sorted, medium dense, fine sand, subrounded to subangular, slightly moist, no odor detected. <b>20242-1062 &amp; 20242-1063 samples collected at 20.0-21 feet bgs.</b>	24				0	100		
End of boring at 21 feet bgs. No groundwater was encountered in the boring. Boring was back filled with 4 (90lb) bags of cement mixed with 10 gallons of potable water.	26							
	28							
	30							
	32							
	34							
	36							
	38							
	40							



# Geologic Log of Boring MSC-D1-SB04



Project <b>MCAS/EL TORO</b>	Northing -	Drilling Company <b>BC2</b>	
Project Number <b>20242</b>	Easting -	Drill Rig <b>CME75</b>	Begin Drilling <b>12/9/99</b>
Client <b>SWDIV</b>	TOC Elevation -	Driller <b>Diego Torres</b>	End Drilling <b>12/9/99</b>
Location <b>DESERT STORM</b>	TOP OF RIM -	Drill Method <b>HSA</b>	Well Completion Date <b>12/9/99</b>
Geologist <b>B. Tanaka</b>	DIAGRAM NOT TO SCALE		
Borehole Diameter <b>8-INCHES</b>	Total Depth of Borehole <b>21 FEET</b>	Depth to Water	<b>NOT ENCOUNTERED</b>

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Soil surface: Hand augured to 4 feet bgs, 5 foot sample was collected, hand augured to 10 feet bgs. Silty Sands (SM): Yellow brown (10YR 5/4), very fine to fine sands, well sorted, medium dense, fine non plastic silts, slightly moist to dry, no odor detected.	0							
	2	SM			0			
	4				0			
Silts (ML): Reddish yellow (7.5YR 6/6).	6				0	10	11	
<b>20242-1064 Sample collected at 5.0-5.5 feet bgs.</b>	8	ML			0	14	11	
	10				0	18	11	
Silty Sands (SM): Dark brown (7.5YR 3/3), fine sands, fine, slightly plastic, silts, slightly moist, no odor detected.	12				0	20	11	
<b>20242-1065 Sample collected at 10.0-10.5 feet bgs.</b>	14	SM			0	20	11	
	16				0	20	11	
	18				0	20	11	
Silty Sand (SM): Reddish yellow (7.5YR 5/6), fine sand, medium dense, fine micaceous silts, slightly plastic, slightly moist, no odor detected.	20				0	20	11	
<b>20242-1066 samples collected at 20.0-20.5 feet bgs.</b>	22				0	20	11	
End of boring at 21 feet bgs. No groundwater was encountered in the boring. Boring was back filled with 4 (90lb) bags of cement mixed with 10 gallons of potable water.	24							
	26							
	28							
	30							
	32							
	34							
	36							
	38							
	40							



# Geologic Log of Boring MSC-D1-SB05

Project <b>MCAS/EL TORO</b>	Northing -	Drilling Company <b>BC2</b>	
Project Number <b>20242</b>	Easting -	Drill Rig <b>CME75</b>	Begin Drilling <b>12/9/99</b>
Client <b>SWDIV</b>	TOC Elevation -	Driller <b>Diego Torres</b>	End Drilling <b>12/9/99</b>
Location <b>DESERT STORM</b>	TOP OF RIM -	Drill Method <b>HSA</b>	Well Completion Date <b>12/9/99</b>
Geologist <b>B. Tanaka</b>	DIAGRAM NOT TO SCALE		
Borehole Diameter <b>8-INCHES</b>	Total Depth of Borehole <b>21 FEET</b>	Depth to Water	<b>NOT ENCOUNTERED</b>

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Soil surface: Soil/Grass surface. Hand augured to 4 feet bgs, 5 foot sample was collected, hand augured to 10 feet bgs. Silty Sand (SM): Yellowish brown (10YR 5/4), very fine to fine sands, well sorted, medium dense, fine non plastic, silts, slightly moist to dry, no odor detected. Silty Sand (SM): Brown (7.5YR 5/4), very fine to fine sands, well sorted, medium dense, fine non plastic silts, slightly moist, no odor detected. <b>20242-1067 Sample collected at 5.0-5.5 feet bgs.</b>	0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40	SM			0 0 0 00 			

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# Geologic Log of Boring MSC-D1-SB06

Project	<b>MCAS/EL TORO</b>	Northing	-	Drilling Company	BC2	
Project Number	<b>20242</b>	Easting	-	Drill Rig	CME75	Begin Drilling 12/9/99
Client	SWDIV	TOC Elevation	-	Driller	Diego Torres	End Drilling 12/9/99
Location	<b>DESERT STORM</b>	TOP OF RIM	-	Drill Method	HSA	Well Completion Date
Geologist	B. Tanaka	DIAGRAM NOT TO SCALE				12/9/99
Borehole Diameter	8-INCHES	Total Depth of Borehole	21 FEET	Depth to Water	NOT ENCOUNTERED	

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Soil surface: Soil/Grass surface. Hand augured to 4 feet bgs, 5 foot sample was collected, hand augured to 10 feet bgs.	0							
Silty Sand (SM): Yellowish brown (10YR 5/4), very fine to fine sands, well sorted, medium dense, fine non plastic, silts, slightly moist to dry, no odor detected.	2	SM						
Silts (ML): Dark brown (7.5YR 3/4), fine, slightly plastic silts, trace fine sand, slightly moist, no odor.	4							
<b>20242-1070 Sample collected at 5.0-5.5 feet bgs.</b>	6	ML				10	100%	
	8							
Sands (SP): Pink (7.5YR 5/4), fine sands, some mediums, subrounded to subangular, medium dense, well sorted, slightly moist, no odor detected.	10					10	100%	
<b>20242-1071 Sample collected at 10.0-10.5 feet bgs.</b>	12							
	14							
	16	SP						
	18							
Sands (SP): Pink (7.5YR 5/4), very fine to fine, well sorted, medium dense sands, slightly moist, no odor detected.	20					18	100%	
<b>20242-1072 samples collected at 20.0-20.5 feet bgs.</b>	22							
End of boring at 21 feet bgs. No groundwater was encountered in the boring. Boring was back filled with 4 (90lb) bags of cement mixed with 10 gallons of potable water.	24							
	26							
	28							
	30							
	32							
	34							
	36							
	38							
	40							

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# Geologic Log of Boring MSC-D1-SB07

Project <b>MCAS/EL TORO</b>	Northing -	Drilling Company <b>BC2</b>	
Project Number <b>20242</b>	Easting -	Drill Rig <b>CME75</b>	Begin Drilling <b>12/9/99</b>
Client <b>SWDIV</b>	TOC Elevation -	Driller <b>Diego Torres</b>	End Drilling <b>12/9/99</b>
Location <b>DESERT STORM</b>	TOP OF RIM -	Drill Method <b>HSA</b>	Well Completion Date <b>12/9/99</b>
Geologist <b>B. Tanaka</b>	DIAGRAM NOT TO SCALE		
Borehole Diameter <b>8-INCHES</b>	Total Depth of Borehole <b>21 FEET</b>	Depth to Water	<b>NOT ENCOUNTERED</b>

DESCRIPTION	Depth (feet)	Soil Group	Graphic Log	Samples	PID/FID (ppm)	Blows/6 in.	Recovery (inches)	BORING DETAIL
Soil surface: Soil/Grass surface. Hand augured to 4 feet bgs, 5 foot sample was collected, hand augured to 10 feet bgs. Silty Sand (SM): Yellowish brown (10YR 5/4), very fine to fine sands, well sorted, medium dense, fine non plastic, silts, slightly moist to dry, no odor detected. Same as above (SM): No odor detected. <b>20242-1073 Sample collected at 5.0-5.5 feet bgs.</b>	0 2 4 6	SM						
Same as above (SM): No odor detected. <b>20242-1074 &amp; 20242-1075 Sample collected at 9.5-10.5 feet bgs.</b>	8 10 12	SM						
Silts (ML): Dark brown (7.5YR 3/6), fine, non plastic. Sand (SP): Dark brown (7.5YR 3/6), fine, medium dense, subrounded to subangular, well sorted, slightly moist, no odor detected.	14 16	ML SP						
Silts (ML): Same as above. <b>20242-1076 samples collected at 20.0-20.5 feet bgs.</b>	18 20	ML						
End of boring at 21 feet bgs. No groundwater was encountered in the boring. Boring was back filled with 4 (90lb) bags of cement mixed with 10 gallons of potable water.	22 24 26 28 30 32 34 36 38 40							



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 OHM Remediation Services Corp.

***Appendix G***  
***Laboratory Analytical Reports***

0004537

**CHAIN-OF-CUSTODY RECORD**

PROJECT DATA MANAGER'S COPY

**A 10073**

FORM 0019 REV. 9-99

MSC-D1 (Desert storm)

LAB COORDINATOR <b>Bienkowski</b>	LAB COORDINATOR'S PHONE <b>949-660-7537</b>	LAB COORDINATOR'S FAX <b>949-475-5433</b>	LABORATORY SERVICE ID <b>991060</b>	LABORATORY CONTACT <b>EMAX</b>	MAIL REPORT (COMPANY NAME) <b>IT</b>
PROJECT NAME <b>ASHTORO</b>	PROJECT LOCATION <b>EL Toro Dolla</b>	PROJECT NUMBER <b>20242</b>	LABORATORY PHONE <b>310-618-8889</b>	LABORATORY FAX	RECIPIENT NAME <b>Dwayne Ishida</b>
PROJECT CONTACT <b>Bienkowski</b>	PROJECT PHONE NUMBER <b>949-451-1666</b>	PROJECT FAX	LABORATORY ADDRESS <b>630 Maple</b>	ADDRESS <b>3347 Michelson #200</b>	
PROJECT ADDRESS	CITY, STATE AND ZIP CODE	CLIENT <b>SU DIV</b>	CITY, STATE AND ZIP CODE <b>Torrance Ca</b>	CITY, STATE AND ZIP CODE <b>IRVINE Ca 92612</b>	
PROJECT MANAGER <b>Sedlak</b>	PROJECT MANAGER'S PHONE <b>949-660-7537</b>	PROJECT MANAGER'S FAX <b>949-475-5433</b>	ANALYZE from "X" end		

Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses	Comments
20242-1063	Soil	12/14/99	1106	NONE	1	3		✓ ✓ ✓ ✓ ✓	
20242-1064	Soil	12/14/99	1145	NONE	1	3		✓ ✓ ✓ ✓ ✓	
20242-1065			1148		1	3		✓ ✓ ✓ ✓ ✓	
20242-1066			1153		1	3		✓ ✓ ✓ ✓ ✓	
20242-1067			1348		1	3		✓ ✓ ✓ ✓ ✓	
20242-1068			1350		1	3		✓ ✓ ✓ ✓ ✓	
20242-1069			1355		1	3		✓ ✓ ✓ ✓ ✓	
20242-1070			1415		1	3		✓ ✓ ✓ ✓ ✓	
20242-1071			1417		1	3		✓ ✓ ✓ ✓ ✓	
20242-1072			1420		1	3		✓ ✓ ✓ ✓ ✓	

COPIES COLLECTED BY <b>DAVIDA</b>	COURIER AND AIR BILL NUMBER	COOLER TEMPERATURE UPON RECEIPT
RELINQUISHED BY <b>Bienkowski</b>	RECEIVED BY <b>Paul</b>	SAMPLE'S CONDITION UPON RECEIPT
DATE <b>12/14/99</b>	TIME <b>1100</b>	

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Manilla - Project Data Manager

**Project Information Section  
For Project Personnel Only  
Do Not Submit to Laboratory**

WBS6200150

MSC-D1 Soil Borings	Sample Type			
	G	C	F	QC
1) MSCD1 SB03				✓
10.0-20.0 (dup)				
2) MSCD1 SB04	✓			
5.0-5.5				
3) MSCD1 SB04	✓			
10.0-10.5				
4) MSCD1 SB04	✓			
20.0-20.5				
5) MSCD1 SB05	✓			
5.0-5.5				
6) MSCD1 SB05	✓			
10.0-10.5				
7) MSCD1 SB05	✓			
20.0-20.5				
8) MSCD1 SB06	✓			
5.0-5.5				
9) MSCD1 SB06	✓			
10.0-10.5				
10) MSCD1 SB06	✓			
20.0-20.5				

Sample Type: G - Grab, C - Composite, F - Field Sample, QC - Quality Control Sample

0004537

**CHAIN-OF-CUSTODY RECORD**

PROJECT DATA MANAGER'S COPY

MSC-D1 (Desert Storm)

A 10066

FORM 0019 REV. 9-99

LAB COORDINATOR B. Bentkowski	LAB COORDINATOR'S PHONE 919-660-7537	LAB COORDINATOR'S FAX 919-475-5433	LABORATORY SERVICE ID 991060	LABORATORY CONTACT EMAX	MAIL REPORT (COMPANY NAME) IT
OBJECT NAME CASE 180	PROJECT LOCATION El Toro - D112	PROJECT NUMBER 00042	LABORATORY PHONE 310-688-8889	LABORATORY FAX	RECIPIENT NAME Wayne Ishida
OBJECT CONTACT B. Bentkowski	PROJECT PHONE NUMBER 919-451-1466	PROJECT FAX	LABORATORY ADDRESS 630 Maple	ADDRESS 3347 Madison, #200	
OBJECT ADDRESS	CITY, STATE AND ZIP CODE	CLIENT SWD1V	CITY, STATE AND ZIP CODE Irvine, CA	CITY, STATE AND ZIP CODE Irvine, CA	
OBJECT MANAGER B. Sedlak	PROJECT MANAGER'S PHONE 919-660-7537	PROJECT MANAGER'S FAX 919-475-5433	Analyses TDH-GAS TDH-Diesel TDH-TDS TDH-Metal EPA 8210 Intox		

Sample Identifier	Matrix	Date	Time	Preserved	# of Cont.	QC Level	T.A.T.	Analyses	Comments
20242-1053	Water	12/9/99	0800	HCL	3	3	5 days	✓	
20242-1054	Soil	0905	NONE	1	3			✓	
20242-1055	Soil	0910	NONE	1	3			✓	
20242-1056	Soil	0920	NONE	1	3			✓	
20242-1057	Soil	1000		1				✓	
20242-1058	Soil	1003		1				✓	
20242-1059	Soil	1006		1				✓	
20242-1060	Soil	1055		1				✓	
20242-1061	Soil	1100		1				✓	
20242-1062	Soil	1105		1				✓	

AMPLES COLLECTED BY: BRIAN TAJAKA	COURIER AND AIR BILL NUMBER:	COOLER TEMPERATURE UPON RECEIPT:
RELINQUISHED BY: [Signature]	RECEIVED BY: [Signature]	SAMPLE'S CONDITION UPON RECEIPT:
	DATE: 12/14/99	TIME: 1600

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Manilla - Project Data Manager

WBS: 02001510

**Project Information Section  
For Project Personnel Only  
Do Not Submit to Laboratory**

MSC-D1 Soil Borings Sample Point Location	Sample Type			
	G	C	F	QC
1) MSCD1 Trip Blank				✓
2) MSCD1 SB01 5.0-5.5	✓			
3) MSCD1 SB01 10.0-10.5	✓			
4) MSCD1 SB01 20.0-20.5	✓			
5) MSCD1 SB02 5.0-5.5	✓			
6) MSCD1 SB02 10.0-10.5	✓			
7) MSCD1 SB02 20.0-20.5	✓			
8) MSCD1 SB03 5.0-5.5	✓			
9) MSCD1 SB03 10.0-10.5	✓			
10) MSCD1 SB03 20.0-20.5	✓			
Comments				
Sample Type: G - Grab, C - Composite, F - Field Sample, QC - Quality Control Sample				

0004537



630 Maple Ave.

Torrance, CA 90503

Telephone: (310) 618-8889

Fax: (310) 618-0818

Date: 01-26-2000

EMAX Batch No.: 99L060

Attn: Dwayne Ishida

IT Corporation  
3347 Michelson Dr. # 200  
Irvine CA 92612

Subject: Laboratory Report

Project: MCAS El Toro/20242/D.O. 112

-----  
Enclosed is the Laboratory report for samples received on  
12/09/99. The data reported include :

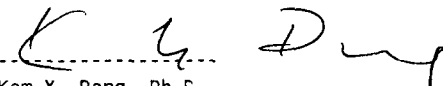
Sample ID	Control #	Col Date	Matrix	Analysis
20242-1053	L060-01	12/09/99	Water	Volatile Organics by GC/MS
20242-1054	L060-02	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1055	L060-03	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1056	L060-04	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1057	L060-05	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1058	L060-06	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1059	L060-07	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1060	L060-08	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1061	L060-09	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1062	L060-10	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1063	L060-11	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1064	L060-12	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1065	L060-13	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS

Sample ID	Control #	Col Date	Matrix	Analysis
20242-1066	L060-14	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1067	L060-15	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1068	L060-16	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1069	L060-17	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1070	L060-18	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1071	L060-19	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1072	L060-20	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1073	L060-21	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1074	L060-22	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1075	L060-23	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1076	L060-24	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1077	L060-25	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1078	L060-26	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1079	L060-27	12/09/99	Soil	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS
20242-1080	L060-28	12/09/99	Water	Modified 8015 by Extraction Modified 8015 by Purge & Trap Volatile Organics by GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

  
 Kam Y. Pang, Ph.D.  
 Laboratory Director

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METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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=====
Client       : IT CORPORATION           Date Collected: 12/09/99
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/09/99
Batch No.    : 99L060                 Date Extracted: 12/21/99 21:09
Sample ID    : 20242-1053             Date Analyzed: 12/21/99 21:09
Lab Samp ID  : L060-01                Dilution Factor: 1
Lab File ID  : RLV430                 Matrix       : WATER
Ext Btch ID  : VOL2801                % Moisture   : NA
Calib. Ref.  : RLV425                 Instrument ID : T-001
=====

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PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	1.1
1,1,2,2-TETRACHLOROETHANE	ND	5	.49
1,1,2-TRICHLOROETHANE	ND	5	.52
1,1-DICHLOROETHANE	ND	5	1.2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	.58
1,2-DICHLOROPROPANE	ND	5	.53
2-BUTANONE	ND	50	7.9
2-CHLOROETHYL VINYLETHER	ND	50	.83
2-HEXANONE	ND	50	1
4-METHYL-2-PENTANONE	ND	50	1
ACETONE	ND	50	10
BENZENE	ND	5	.85
BROMODICHLOROMETHANE	ND	5	.33
BROMOFORM	ND	5	.29
BROMOMETHANE	ND	5	1.5
CARBON DISULFIDE	ND	5	1.3
CARBON TETRACHLORIDE	ND	5	1.3
CHLOROBENZENE	ND	5	.68
CHLOROETHANE	ND	5	2.9
CHLOROFORM	ND	5	.85
CHLOROMETHANE	ND	5	1.7
CIS-1,2-DICHLOROETHENE	ND	5	.97
CIS-1,3-DICHLOROPROPENE	ND	5	.47
DIBROMOCHLOROMETHANE	ND	5	.29
ETHYLBENZENE	ND	5	.72
MTBE	ND	10	.96
METHYLENE CHLORIDE	3JB	5	1.8
STYRENE	ND	5	.58
TETRACHLOROETHENE	ND	5	1.2
TOLUENE	ND	5	.92
TRANS-1,2-DICHLOROETHENE	ND	5	1.5
TRANS-1,3-DICHLOROPROPENE	ND	5	.45
TRICHLOROETHENE	ND	5	.9
VINYL ACETATE	ND	50	6.2
VINYL CHLORIDE	ND	5	1.7
XYLENES	ND	5	2.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	89	62-139
TOLUENE-D8	95	75-125
BROMOFLUOROBENZENE	95	75-125

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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=====
Client       : IT CORPORATION           Date Collected: 12/09/99
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.    : 99L060                 Date Extracted: 12/21/99 22:17
Sample ID    : 20242-1054             Date Analyzed: 12/21/99 22:17
Lab Samp ID  : L060-02                Dilution Factor: 1
Lab File ID  : RLV432                 Matrix       : SOIL
Ext Btch ID  : VOL2801                % Moisture    : 5.8
Calib. Ref.  : RLV425                 Instrument ID : T-001
=====

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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.3	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.3	.35
1,1,2-TRICHLOROETHANE	ND	5.3	.25
1,1-DICHLOROETHANE	ND	5.3	.32
1,1-DICHLOROETHENE	ND	5.3	.57
1,2-DICHLOROETHANE	ND	5.3	.35
1,2-DICHLOROPROPANE	ND	5.3	.4
2-BUTANONE	ND	53	5.4
2-CHLOROETHYL VINYLETHER	ND	53	.18
2-HEXANONE	ND	53	1.3
4-METHYL-2-PENTANONE	ND	53	1.2
ACETONE	ND	53	4.3
BENZENE	ND	5.3	.26
BROMODICHLOROMETHANE	ND	5.3	.27
BROMOFORM	ND	5.3	.3
BROMOMETHANE	ND	5.3	.68
CARBON DISULFIDE	ND	5.3	.13
CARBON TETRACHLORIDE	ND	5.3	.84
CHLOROBENZENE	ND	5.3	.21
CHLOROETHANE	ND	5.3	1.9
CHLOROFORM	ND	5.3	.45
CHLOROMETHANE	ND	5.3	2.2
CIS-1,2-DICHLOROETHENE	ND	5.3	.31
CIS-1,3-DICHLOROPROPENE	ND	5.3	.24
DIBROMOCHLOROMETHANE	ND	5.3	.084
ETHYLBENZENE	ND	5.3	.42
MTBE	ND	11	.39
METHYLENE CHLORIDE	2.8JB	5.3	.43
STYRENE	ND	5.3	.46
TETRACHLOROETHENE	ND	5.3	.26
TOLUENE	ND	5.3	.33
TRANS-1,2-DICHLOROETHENE	ND	5.3	.31
TRANS-1,3-DICHLOROPROPENE	ND	5.3	.71
TRICHLOROETHENE	ND	5.3	.27
VINYL ACETATE	ND	53	.76
VINYL CHLORIDE	ND	5.3	1.1
XYLENES	ND	5.3	1.2
SURROGATE PARAMETERS	% RECOVERY	QC LIMIT	
1,2-DICHLOROETHANE-D4	90	52-149	
TOLUENE-D8	97	65-135	
BROMOFLUOROBENZENE	97	65-135	

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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=====
Client       : IT CORPORATION           Date Collected: 12/09/99
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.    : 99L060                 Date Extracted: 12/21/99 22:51
Sample ID    : 20242-1055             Date Analyzed: 12/21/99 22:51
Lab Samp ID  : L060-03                Dilution Factor: 1
Lab File ID  : RLV433                 Matrix       : SOIL
Ext Btch ID  : VOL2801                % Moisture    : 10.1
Calib. Ref.  : RLV425                 Instrument ID : T-001
=====

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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.6	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.6	.37
1,1,2-TRICHLOROETHANE	ND	5.6	.26
1,1-DICHLOROETHANE	ND	5.6	.34
1,1-DICHLOROETHENE	ND	5.6	.6
1,2-DICHLOROETHANE	ND	5.6	.36
1,2-DICHLOROPROPANE	ND	5.6	.42
2-BUTANONE	ND	56	5.7
2-CHLOROETHYL VINYLETHER	ND	56	.19
2-HEXANONE	ND	56	1.4
4-METHYL-2-PENTANONE	ND	56	1.3
ACETONE	ND	56	4.5
BENZENE	ND	5.6	.28
BROMODICHLOROMETHANE	ND	5.6	.29
BROMOFORM	ND	5.6	.31
BROMOMETHANE	ND	5.6	.71
CARBON DISULFIDE	ND	5.6	.14
CARBON TETRACHLORIDE	ND	5.6	.88
CHLOROBENZENE	ND	5.6	.22
CHLOROETHANE	ND	5.6	2
CHLOROFORM	ND	5.6	.47
CHLOROMETHANE	ND	5.6	2.3
CIS-1,2-DICHLOROETHENE	ND	5.6	.32
CIS-1,3-DICHLOROPROPENE	ND	5.6	.25
DIBROMOCHLOROMETHANE	ND	5.6	.088
ETHYLBENZENE	ND	5.6	.44
MTBE	ND	11	.41
METHYLENE CHLORIDE	3.7JB	5.6	.45
STYRENE	ND	5.6	.49
TETRACHLOROETHENE	ND	5.6	.27
TOLUENE	ND	5.6	.35
TRANS-1,2-DICHLOROETHENE	ND	5.6	.32
TRANS-1,3-DICHLOROPROPENE	ND	5.6	.74
TRICHLOROETHENE	ND	5.6	.28
VINYL ACETATE	ND	56	.8
VINYL CHLORIDE	ND	5.6	1.1
XYLENES	ND	5.6	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	96	52-149
TOLUENE-D8	96	65-135
BROMOFLUOROBENZENE	97	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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Client       : IT CORPORATION           Date Collected: 12/09/99
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.    : 99L060                  Date Extracted: 12/21/99 23:25
Sample ID    : 20242-1056              Date Analyzed: 12/21/99 23:25
Samp ID:     L060-04                   Dilution Factor: 1
Lab File ID:  RLV434                   Matrix       : SOIL
Ext Btch ID:  VOL2801                  % Moisture    : 4.0
Calib. Ref.:  RLV425                   Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	.34
1,1,2,2-TETRACHLOROETHANE	ND	5.2	.34
1,1,2-TRICHLOROETHANE	ND	5.2	.24
1,1-DICHLOROETHANE	ND	5.2	.32
1,1-DICHLOROETHENE	ND	5.2	.56
1,2-DICHLOROETHANE	ND	5.2	.34
1,2-DICHLOROPROPANE	ND	5.2	.39
2-BUTANONE	ND	52	5.3
2-CHLOROETHYL VINYLETHER	ND	52	.18
2-HEXANONE	ND	52	1.3
4-METHYL-2-PENTANONE	ND	52	1.2
ACETONE	ND	52	4.3
BENZENE	ND	5.2	.26
BROMODICHLOROMETHANE	ND	5.2	.27
BROMOFORM	ND	5.2	.29
BROMOMETHANE	ND	5.2	.67
CARBON DISULFIDE	ND	5.2	.13
CARBON TETRACHLORIDE	ND	5.2	.82
CHLOROBENZENE	ND	5.2	.21
CHLOROETHANE	ND	5.2	1.8
CHLOROFORM	ND	5.2	.44
CHLOROMETHANE	ND	5.2	2.1
CIS-1,2-DICHLOROETHENE	ND	5.2	.3
CIS-1,3-DICHLOROPROPENE	ND	5.2	.23
BROMOCHLOROMETHANE	ND	5.2	.082
ETHYLBENZENE	ND	5.2	.41
MTBE	ND	10	.39
METHYLENE CHLORIDE	2.4JB	5.2	.43
STYRENE	ND	5.2	.46
TETRACHLOROETHENE	ND	5.2	.25
TOLUENE	ND	5.2	.33
TRANS-1,2-DICHLOROETHENE	ND	5.2	.3
TRANS-1,3-DICHLOROPROPENE	ND	5.2	.69
TRICHLOROETHENE	ND	5.2	.27
VINYL ACETATE	ND	52	.75
VINYL CHLORIDE	ND	5.2	1.1
XYLENES	ND	5.2	1.1
SURROGATE PARAMETERS	% RECOVERY	QC LIMIT	
1,2-DICHLOROETHANE-D4	94	52-149	
TOLUENE-D8	96	65-135	
BROMOFLUOROBENZENE	98	65-135	

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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=====
Client      : IT CORPORATION           Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/21/99 23:59
Sample ID   : 20242-1057             Date Analyzed: 12/21/99 23:59
Lab Samp ID : L060-05                Dilution Factor: 1
Lab File ID : RLV435                 Matrix       : SOIL
Ext Btch ID : VOL2801                % Moisture    : 5.9
Calib. Ref.: RLV425                 Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.3	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.3	.35
1,1,2-TRICHLOROETHANE	ND	5.3	.25
1,1-DICHLOROETHANE	ND	5.3	.32
1,1-DICHLOROETHENE	ND	5.3	.57
1,2-DICHLOROETHANE	ND	5.3	.35
1,2-DICHLOROPROPANE	ND	5.3	.4
2-BUTANONE	ND	53	5.4
2-CHLOROETHYL VINYLETHER	ND	53	.18
2-HEXANONE	ND	53	1.3
4-METHYL-2-PENTANONE	ND	53	1.2
ACETONE	ND	53	4.3
BENZENE	ND	5.3	.26
BROMODICHLOROMETHANE	ND	5.3	.28
BROMOFORM	ND	5.3	.3
BROMOMETHANE	ND	5.3	.68
CARBON DISULFIDE	ND	5.3	.13
CARBON TETRACHLORIDE	ND	5.3	.84
CHLOROBENZENE	ND	5.3	.21
CHLOROETHANE	ND	5.3	1.9
CHLOROFORM	ND	5.3	.45
CHLOROMETHANE	ND	5.3	2.2
CIS-1,2-DICHLOROETHENE	ND	5.3	.31
CIS-1,3-DICHLOROPROPENE	ND	5.3	.24
DIBROMOCHLOROMETHANE	ND	5.3	.084
ETHYLBENZENE	ND	5.3	.42
MTBE	ND	11	.39
METHYLENE CHLORIDE	1.8JB	5.3	.43
STYRENE	ND	5.3	.47
TETRACHLOROETHENE	ND	5.3	.26
TOLUENE	ND	5.3	.33
TRANS-1,2-DICHLOROETHENE	ND	5.3	.31
TRANS-1,3-DICHLOROPROPENE	ND	5.3	.71
TRICHLOROETHENE	ND	5.3	.27
VINYL ACETATE	ND	53	.76
VINYL CHLORIDE	ND	5.3	1.1
XYLENES	ND	5.3	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	91	52-149
TOLUENE-D8	96	65-135
BROMOFLUOROBENZENE	95	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

2007

METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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=====
Client       : IT CORPORATION           Date Collected: 12/09/99
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.    : 99L060                 Date Extracted: 12/22/99 00:32
Sample ID    : 20242-1058             Date Analyzed: 12/22/99 00:32
Sub Samp ID  : L060-06                Dilution Factor: 1
Lab File ID  : RLV436                 Matrix       : SOIL
Ext Btch ID  : VOL2801                % Moisture    : 6.8
Calib. Ref.  : RLV425                 Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.4	.36
1,1,2-TRICHLOROETHANE	ND	5.4	.25
1,1-DICHLOROETHANE	ND	5.4	.33
1,1-DICHLOROETHENE	ND	5.4	.58
1,2-DICHLOROETHANE	ND	5.4	.35
1,2-DICHLOROPROPANE	ND	5.4	.4
2-BUTANONE	ND	5.4	5.5
2-CHLOROETHYL VINYLETHER	ND	5.4	.18
2-HEXANONE	ND	5.4	1.3
4-METHYL-2-PENTANONE	ND	5.4	1.2
ACETONE	ND	5.4	4.4
BENZENE	ND	5.4	.27
BROMODICHLOROMETHANE	ND	5.4	.28
BROMOFORM	ND	5.4	.3
BROMOMETHANE	ND	5.4	.69
CARBON DISULFIDE	ND	5.4	.14
CARBON TETRACHLORIDE	ND	5.4	.85
CHLOROBENZENE	ND	5.4	.21
CHLOROETHANE	ND	5.4	1.9
CHLOROFORM	ND	5.4	.45
CHLOROMETHANE	ND	5.4	2.2
CIS-1,2-DICHLOROETHENE	ND	5.4	.31
CIS-1,3-DICHLOROPROPENE	ND	5.4	.24
DIBROMOCHLOROMETHANE	ND	5.4	.085
DIBROMOBENZENE	ND	5.4	.42
MTBE	ND	11	.4
METHYLENE CHLORIDE	2.5JB	5.4	.44
STYRENE	ND	5.4	.47
TETRACHLOROETHENE	ND	5.4	.26
TOLUENE	ND	5.4	.34
TRANS-1,2-DICHLOROETHENE	ND	5.4	.31
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.71
TRICHLOROETHENE	ND	5.4	.27
VINYL ACETATE	ND	5.4	.77
VINYL CHLORIDE	ND	5.4	1.1
XYLENES	ND	5.4	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	96	52-149
TOLUENE-D8	95	65-135
BROMOFLUOROBENZENE	98	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

2008

METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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=====
Client       : IT CORPORATION           Date Collected: 12/09/99
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.    : 99L060                  Date Extracted: 12/22/99 01:06
Sample ID    : 20242-1059              Date Analyzed: 12/22/99 01:06
Lab Samp ID  : L060-07                 Dilution Factor: 1
Lab File ID  : RLV437                  Matrix          : SOIL
Ext Btch ID  : VOL2801                 % Moisture       : 7.9
Calib. Ref.  : RLV425                  Instrument ID    : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.4	.36
1,1,2-TRICHLOROETHANE	ND	5.4	.25
1,1-DICHLOROETHANE	ND	5.4	.33
1,1-DICHLOROETHENE	ND	5.4	.58
1,2-DICHLOROETHANE	ND	5.4	.35
1,2-DICHLOROPROPANE	ND	5.4	.41
2-BUTANONE	ND	5.4	5.6
2-CHLOROETHYL VINYLETHER	ND	5.4	.18
2-HEXANONE	ND	5.4	1.4
4-METHYL-2-PENTANONE	ND	5.4	1.2
ACETONE	ND	5.4	4.4
BENZENE	ND	5.4	.27
BROMODICHLOROMETHANE	ND	5.4	.28
BROMOFORM	ND	5.4	.3
BROMOMETHANE	ND	5.4	.69
CARBON DISULFIDE	ND	5.4	.14
CARBON TETRACHLORIDE	ND	5.4	.86
CHLOROBENZENE	ND	5.4	.21
CHLOROETHANE	ND	5.4	1.9
CHLOROFORM	ND	5.4	.46
CHLOROMETHANE	ND	5.4	2.2
CIS-1,2-DICHLOROETHENE	ND	5.4	.32
CIS-1,3-DICHLOROPROPENE	ND	5.4	.24
DIBROMOCHLOROMETHANE	ND	5.4	.086
ETHYLBENZENE	ND	5.4	.43
MTBE	ND	11	.4
METHYLENE CHLORIDE	2.7JB	5.4	.44
STYRENE	ND	5.4	.48
TETRACHLOROETHENE	ND	5.4	.26
TOLUENE	ND	5.4	.34
TRANS-1,2-DICHLOROETHENE	ND	5.4	.31
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.72
TRICHLOROETHENE	ND	5.4	.28
VINYL ACETATE	ND	5.4	.78
VINYL CHLORIDE	ND	5.4	1.1
XYLENES	ND	5.4	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	89	52-149
TOLUENE-D8	96	65-135
BROMOFLUOROBENZENE	98	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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Client      : IT CORPORATION          Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/22/99 01:40
Sample ID   : 20242-1060             Date Analyzed: 12/22/99 01:40
Lab Samp ID : L060-08                Dilution Factor: 1
Lab File ID : RLV438                 Matrix       : SOIL
Ext Btch ID : VOL2801                % Moisture    : 4.5
Calib. Ref.: RLV425                 Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.2	.35
1,1,2-TRICHLOROETHANE	ND	5.2	.24
1,1-DICHLOROETHANE	ND	5.2	.32
1,1-DICHLOROETHENE	ND	5.2	.56
1,2-DICHLOROETHANE	ND	5.2	.34
1,2-DICHLOROPROPANE	ND	5.2	.39
2-BUTANONE	ND	52	5.4
2-CHLOROETHYL VINYLETHER	ND	52	.18
2-HEXANONE	ND	52	1.3
4-METHYL-2-PENTANONE	ND	52	1.2
ACETONE	ND	52	4.3
BENZENE	ND	5.2	.26
BROMODICHLOROMETHANE	ND	5.2	.27
BROMOFORM	ND	5.2	.29
BROMOMETHANE	ND	5.2	.67
CARBON DISULFIDE	ND	5.2	.13
CARBON TETRACHLORIDE	ND	5.2	.83
CHLOROBENZENE	ND	5.2	.21
CHLOROETHANE	ND	5.2	1.9
CHLOROFORM	ND	5.2	.44
CHLOROMETHANE	ND	5.2	2.2
CIS-1,2-DICHLOROETHENE	ND	5.2	.3
CIS-1,3-DICHLOROPROPENE	ND	5.2	.23
BROMOCHLOROMETHANE	ND	5.2	.083
HYLBENZENE	ND	5.2	.41
MTBE	ND	10	.39
METHYLENE CHLORIDE	1.8JB	5.2	.43
STYRENE	ND	5.2	.46
TETRACHLOROETHENE	ND	5.2	.25
TOLUENE	ND	5.2	.33
TRANS-1,2-DICHLOROETHENE	ND	5.2	.3
TRANS-1,3-DICHLOROPROPENE	ND	5.2	.7
TRICHLOROETHENE	ND	5.2	.27
VINYL ACETATE	ND	52	.75
VINYL CHLORIDE	ND	5.2	1.1
XYLENES	ND	5.2	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	92	52-149
TOLUENE-D8	95	65-135
BROMOFLUOROBENZENE	95	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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Client      : IT CORPORATION          Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/22/99 02:15
Sample ID   : 20242-1061             Date Analyzed: 12/22/99 02:15
Lab Samp ID : L060-09                 Dilution Factor: 1
Lab File ID : RLV439                  Matrix          : SOIL
Ext Btch ID : VOL2801                 % Moisture       : 2.9
Calib. Ref. : RLV425                  Instrument ID    : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.1	.34
1,1,2,2-TETRACHLOROETHANE	ND	5.1	.34
1,1,2-TRICHLOROETHANE	ND	5.1	.24
1,1-DICHLOROETHANE	ND	5.1	.31
1,1-DICHLOROETHENE	ND	5.1	.55
1,2-DICHLOROETHANE	ND	5.1	.34
1,2-DICHLOROPROPANE	ND	5.1	.39
2-BUTANONE	ND	51	5.3
2-CHLOROETHYL VINYLETHER	ND	51	.18
2-HEXANONE	ND	51	1.3
4-METHYL-2-PENTANONE	ND	51	1.2
ACETONE	ND	51	4.2
BENZENE	ND	5.1	.26
BROMODICHLOROMETHANE	ND	5.1	.27
BROMOFORM	ND	5.1	.29
BROMOMETHANE	ND	5.1	.66
CARBON DISULFIDE	ND	5.1	.13
CARBON TETRACHLORIDE	ND	5.1	.81
CHLOROBENZENE	ND	5.1	.2
CHLOROETHANE	ND	5.1	1.8
CHLOROFORM	ND	5.1	.44
CHLOROMETHANE	ND	5.1	2.1
CIS-1,2-DICHLOROETHENE	ND	5.1	.3
CIS-1,3-DICHLOROPROPENE	ND	5.1	.23
DIBROMOCHLOROMETHANE	ND	5.1	.081
ETHYLBENZENE	ND	5.1	.4
MTBE	ND	10	.38
METHYLENE CHLORIDE	1.7JB	5.1	.42
STYRENE	ND	5.1	.45
TETRACHLOROETHENE	ND	5.1	.25
TOLUENE	ND	5.1	.32
TRANS-1,2-DICHLOROETHENE	ND	5.1	.3
TRANS-1,3-DICHLOROPROPENE	ND	5.1	.69
TRICHLOROETHENE	ND	5.1	.26
VINYL ACETATE	ND	51	.74
VINYL CHLORIDE	ND	5.1	1
XYLENES	ND	5.1	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	93	52-149
TOLUENE-D8	96	65-135
BROMOFLUOROBENZENE	98	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis



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Client      : IT CORPORATION          Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/22/99 12:25
Sample ID   : 20242-1062             Date Analyzed: 12/22/99 12:25
Lab Samp ID : L060-10                Dilution Factor: 1
Lab File ID : RLV451                 Matrix       : SOIL
Ext Btch ID : VOL2901                % Moisture    : 4.8
Calib. Ref.: RLV446                 Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.3	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.3	.35
1,1,2-TRICHLOROETHANE	ND	5.3	.24
1,1-DICHLOROETHANE	ND	5.3	.32
1,1-DICHLOROETHENE	ND	5.3	.57
1,2-DICHLOROETHANE	ND	5.3	.34
1,2-DICHLOROPROPANE	ND	5.3	.39
2-BUTANONE	ND	53	5.4
2-CHLOROETHYL VINYLETHER	ND	53	.18
2-HEXANONE	ND	53	1.3
4-METHYL-2-PENTANONE	ND	53	1.2
ACETONE	ND	53	4.3
BENZENE	ND	5.3	.26
BROMODICHLOROMETHANE	ND	5.3	.27
BROMOFORM	ND	5.3	.29
BROMOMETHANE	ND	5.3	.67
CARBON DISULFIDE	ND	5.3	.13
CARBON TETRACHLORIDE	ND	5.3	.83
CHLOROBENZENE	ND	5.3	.21
CHLOROETHANE	ND	5.3	1.9
CHLOROFORM	ND	5.3	.45
CHLOROMETHANE	ND	5.3	2.2
CIS-1,2-DICHLOROETHENE	ND	5.3	.31
CIS-1,3-DICHLOROPROPENE	ND	5.3	.23
BROMOCHLOROMETHANE	ND	5.3	.083
ETHYLBENZENE	ND	5.3	.41
MTBE	ND	11	.39
METHYLENE CHLORIDE	2.6JB	5.3	.43
STYRENE	ND	5.3	.46
TETRACHLOROETHENE	ND	5.3	.26
TOLUENE	ND	5.3	.33
TRANS-1,2-DICHLOROETHENE	ND	5.3	.3
TRANS-1,3-DICHLOROPROPENE	ND	5.3	.7
TRICHLOROETHENE	ND	5.3	.27
VINYL ACETATE	ND	53	.75
VINYL CHLORIDE	ND	5.3	1.1
XYLENES	ND	5.3	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	74	52-149
TOLUENE-D8	96	65-135
BROMOFLUOROBENZENE	100	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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Client       : IT CORPORATION           Date Collected: 12/09/99
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.    : 99L060                 Date Extracted: 12/22/99 12:59
Sample ID    : 20242-1063             Date Analyzed: 12/22/99 12:59
Lab Samp ID  : L060-11                Dilution Factor: 1
Lab File ID  : RLV452                 Matrix       : SOIL
Ext Btch ID  : VOL2901                % Moisture   : 2.5
Calib. Ref.  : RLV446                 Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.1	.34
1,1,2,2-TETRACHLOROETHANE	ND	5.1	.34
1,1,2-TRICHLOROETHANE	ND	5.1	.24
1,1-DICHLOROETHANE	ND	5.1	.31
1,1-DICHLOROETHENE	ND	5.1	.55
1,2-DICHLOROETHANE	ND	5.1	.33
1,2-DICHLOROPROPANE	ND	5.1	.39
2-BUTANONE	ND	51	5.3
2-CHLOROETHYL VINYLETHER	ND	51	.17
2-HEXANONE	ND	51	1.3
4-METHYL-2-PENTANONE	ND	51	1.2
ACETONE	ND	51	4.2
BENZENE	ND	5.1	.25
BROMODICHLOROMETHANE	ND	5.1	.27
BROMOFORM	ND	5.1	.29
BROMOMETHANE	ND	5.1	.66
CARBON DISULFIDE	ND	5.1	.13
CARBON TETRACHLORIDE	ND	5.1	.81
CHLOROBENZENE	ND	5.1	.2
CHLOROETHANE	ND	5.1	1.8
CHLOROFORM	ND	5.1	.43
CHLOROMETHANE	ND	5.1	2.1
CIS-1,2-DICHLOROETHENE	ND	5.1	.3
CIS-1,3-DICHLOROPROPENE	ND	5.1	.23
DIBROMOCHLOROMETHANE	ND	5.1	.081
ETHYLBENZENE	ND	5.1	.4
MTBE	ND	10	.38
METHYLENE CHLORIDE	2.3JB	5.1	.42
STYRENE	ND	5.1	.45
TETRACHLOROETHENE	ND	5.1	.25
TOLUENE	ND	5.1	.32
TRANS-1,2-DICHLOROETHENE	ND	5.1	.3
TRANS-1,3-DICHLOROPROPENE	ND	5.1	.68
TRICHLOROETHENE	ND	5.1	.26
VINYL ACETATE	ND	51	.73
VINYL CHLORIDE	ND	5.1	1
XYLENES	ND	5.1	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	88	52-149
TOLUENE-D8	96	65-135
BROMOFLUOROBENZENE	98	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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Client      : IT CORPORATION          Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/22/99 03:57
Sample ID: 20242-1064                 Date Analyzed: 12/22/99 03:57
Lab Samp ID: L060-12                  Dilution Factor: 1
Lab File ID: RLV442                   Matrix          : SOIL
Ext Btch ID: VOL2801                  % Moisture       : 10.3
Calib. Ref.: RLV425                   Instrument ID    : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.6	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.6	.37
1,1,2-TRICHLOROETHANE	ND	5.6	.26
1,1-DICHLOROETHANE	ND	5.6	.34
1,1-DICHLOROETHENE	ND	5.6	.6
1,2-DICHLOROETHANE	ND	5.6	.36
1,2-DICHLOROPROPANE	ND	5.6	.42
2-BUTANONE	ND	56	5.7
2-CHLOROETHYL VINYLETHER	ND	56	.19
2-HEXANONE	ND	56	1.4
4-METHYL-2-PENTANONE	ND	56	1.3
ACETONE	ND	56	4.6
BENZENE	ND	5.6	.28
BROMODICHLOROMETHANE	ND	5.6	.29
BROMOFORM	ND	5.6	.31
BROMOMETHANE	ND	5.6	.71
CARBON DISULFIDE	ND	5.6	.14
CARBON TETRACHLORIDE	ND	5.6	.88
CHLOROBENZENE	ND	5.6	.22
CHLOROETHANE	ND	5.6	.2
CHLOROFORM	ND	5.6	.47
CHLOROMETHANE	ND	5.6	2.3
CIS-1,2-DICHLOROETHENE	ND	5.6	.32
CIS-1,3-DICHLOROPROPENE	ND	5.6	.25
BROMOCHLOROMETHANE	ND	5.6	.088
ETHYLBENZENE	ND	5.6	.44
MTBE	ND	11	.41
METHYLENE CHLORIDE	1.6JB	5.6	.46
STYRENE	ND	5.6	.49
TETRACHLOROETHENE	ND	5.6	.27
TOLUENE	ND	5.6	.35
TRANS-1,2-DICHLOROETHENE	ND	5.6	.32
TRANS-1,3-DICHLOROPROPENE	ND	5.6	.74
TRICHLOROETHENE	ND	5.6	.28
VINYL ACETATE	ND	56	.8
VINYL CHLORIDE	ND	5.6	1.1
XYLENES	ND	5.6	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	80	52-149
TOLUENE-D8	94	65-135
BROMOFLUOROBENZENE	93	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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Client       : IT CORPORATION           Date Collected: 12/09/99
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.    : 99L060                  Date Extracted: 12/22/99 13:33
Sample ID    : 20242-1065              Date Analyzed: 12/22/99 13:33
Lab Samp ID  : L060-13                  Dilution Factor: 1
Lab File ID  : RLV453                   Matrix          : SOIL
Ext Btch ID  : VOL2901                  % Moisture       : 7.5
Calib. Ref.  : RLV446                   Instrument ID    : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.4	.36
1,1,2-TRICHLOROETHANE	ND	5.4	.25
1,1-DICHLOROETHANE	ND	5.4	.33
1,1-DICHLOROETHENE	ND	5.4	.58
1,2-DICHLOROETHANE	ND	5.4	.35
1,2-DICHLOROPROPANE	ND	5.4	.41
2-BUTANONE	ND	5.4	5.5
2-CHLOROETHYL VINYLETHER	ND	5.4	.18
2-HEXANONE	ND	5.4	1.3
4-METHYL-2-PENTANONE	ND	5.4	1.2
ACETONE	ND	5.4	4.4
BENZENE	ND	5.4	.27
BROMODICHLOROMETHANE	ND	5.4	.28
BROMOFORM	ND	5.4	.3
BROMOMETHANE	ND	5.4	.69
CARBON DISULFIDE	ND	5.4	.14
CARBON TETRACHLORIDE	ND	5.4	.86
CHLOROBENZENE	ND	5.4	.21
CHLOROETHANE	ND	5.4	1.9
CHLOROFORM	ND	5.4	.46
CHLOROMETHANE	ND	5.4	2.2
CIS-1,2-DICHLOROETHENE	ND	5.4	.31
CIS-1,3-DICHLOROPROPENE	ND	5.4	.24
DIBROMOCHLOROMETHANE	ND	5.4	.085
ETHYLBENZENE	ND	5.4	.42
MTBE	ND	11	.4
METHYLENE CHLORIDE	2.5JB	5.4	.44
STYRENE	ND	5.4	.47
TETRACHLOROETHENE	ND	5.4	.26
TOLUENE	ND	5.4	.34
TRANS-1,2-DICHLOROETHENE	ND	5.4	.31
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.72
TRICHLOROETHENE	ND	5.4	.28
VINYL ACETATE	ND	5.4	.77
VINYL CHLORIDE	ND	5.4	1.1
XYLENES	ND	5.4	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	91	52-149
TOLUENE-D8	94	65-135
BROMOFLUOROBENZENE	96	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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Client      : IT CORPORATION          Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/22/99 14:07
Sample ID   : 20242-1066             Date Analyzed: 12/22/99 14:07
Lab Samp ID : L060-14                Dilution Factor: 1
Lab File ID : RLV454                 Matrix       : SOIL
Ext Btch ID : VOL2901                % Moisture    : 8.5
Calib. Ref. : RLV446                 Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.5	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.5	.36
1,1,2-TRICHLOROETHANE	ND	5.5	.25
1,1-DICHLOROETHANE	ND	5.5	.33
1,1-DICHLOROETHENE	ND	5.5	.59
1,2-DICHLOROETHANE	ND	5.5	.36
1,2-DICHLOROPROPANE	ND	5.5	.41
2-BUTANONE	ND	55	5.6
2-CHLOROETHYL VINYLETHER	ND	55	.19
2-HEXANONE	ND	55	1.4
4-METHYL-2-PENTANONE	ND	55	1.2
ACETONE	ND	55	4.5
BENZENE	ND	5.5	.27
BROMODICHLOROMETHANE	ND	5.5	.28
BROMOFORM	ND	5.5	.3
BROMOMETHANE	ND	5.5	.7
CARBON DISULFIDE	ND	5.5	.14
CARBON TETRACHLORIDE	ND	5.5	.86
CHLOROBENZENE	ND	5.5	.22
CHLOROETHANE	ND	5.5	1.9
CHLOROFORM	ND	5.5	.46
CHLOROMETHANE	ND	5.5	2.2
CIS-1,2-DICHLOROETHENE	ND	5.5	.32
CIS-1,3-DICHLOROPROPENE	ND	5.5	.24
IBROMOCHLOROMETHANE	ND	5.5	.086
ETHYLBENZENE	ND	5.5	.43
MTBE	ND	11	.41
METHYLENE CHLORIDE	2.8JB	5.5	.45
STYRENE	ND	5.5	.48
TETRACHLOROETHENE	ND	5.5	.27
TOLUENE	ND	5.5	.34
TRANS-1,2-DICHLOROETHENE	ND	5.5	.31
TRANS-1,3-DICHLOROPROPENE	ND	5.5	.73
TRICHLOROETHENE	ND	5.5	.28
VINYL ACETATE	ND	55	.78
VINYL CHLORIDE	ND	5.5	1.1
XYLENES	ND	5.5	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	92	52-149
TOLUENE-D8	94	65-135
BROMOFLUOROBENZENE	100	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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Client      : IT CORPORATION           Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/22/99 14:41
Sample ID   : 20242-1067             Date Analyzed: 12/22/99 14:41
Lab Samp ID : L060-15                 Dilution Factor: 1
Lab File ID : RLV455                 Matrix      : SOIL
Ext Btch ID : VOL2901                % Moisture   : 12.7
Calib. Ref. : RLV446                 Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.7	.38
1,1,2,2-TETRACHLOROETHANE	ND	5.7	.38
1,1,2-TRICHLOROETHANE	ND	5.7	.27
1,1-DICHLOROETHANE	ND	5.7	.35
1,1-DICHLOROETHENE	ND	5.7	.62
1,2-DICHLOROETHANE	ND	5.7	.37
1,2-DICHLOROPROPANE	ND	5.7	.43
2-BUTANONE	ND	57	5.9
2-CHLOROETHYL VINYLETHER	ND	57	.19
2-HEXANONE	ND	57	1.4
4-METHYL-2-PENTANONE	ND	57	1.3
ACETONE	ND	57	4.7
BENZENE	ND	5.7	.28
BROMODICHLOROMETHANE	ND	5.7	.3
BROMOFORM	ND	5.7	.32
BROMOMETHANE	ND	5.7	.73
CARBON DISULFIDE	ND	5.7	.14
CARBON TETRACHLORIDE	ND	5.7	.91
CHLOROBENZENE	ND	5.7	.23
CHLOROETHANE	ND	5.7	2
CHLOROFORM	ND	5.7	.49
CHLOROMETHANE	ND	5.7	2.4
CIS-1,2-DICHLOROETHENE	ND	5.7	.33
CIS-1,3-DICHLOROPROPENE	ND	5.7	.25
DIBROMOCHLOROMETHANE	ND	5.7	.09
ETHYLBENZENE	ND	5.7	.45
MTBE	ND	11	.42
METHYLENE CHLORIDE	3.6JB	5.7	.47
STYRENE	ND	5.7	.5
TETRACHLOROETHENE	ND	5.7	.28
TOLUENE	ND	5.7	.36
TRANS-1,2-DICHLOROETHENE	ND	5.7	.33
TRANS-1,3-DICHLOROPROPENE	ND	5.7	.76
TRICHLOROETHENE	ND	5.7	.29
VINYL ACETATE	ND	57	.82
VINYL CHLORIDE	ND	5.7	1.2
XYLENES	ND	5.7	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	91	52-149
TOLUENE-D8	95	65-135
BROMOFLUOROBENZENE	95	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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Client       : IT CORPORATION           Date Collected: 12/09/99
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.    : 99L060                 Date Extracted: 12/22/99 15:15
Sample ID    : 20242-1068             Date Analyzed: 12/22/99 15:15
Lab Samp ID  : L060-16                Dilution Factor: 1
Lab File ID  : RLV456                 Matrix          : SOIL
Ext Btch ID  : VOL2901                % Moisture       : 10.0
Calib. Ref.  : RLV446                 Instrument ID    : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.6	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.6	.37
1,1,2-TRICHLOROETHANE	ND	5.6	.26
1,1-DICHLOROETHANE	ND	5.6	.34
1,1-DICHLOROETHENE	ND	5.6	.6
1,2-DICHLOROETHANE	ND	5.6	.36
1,2-DICHLOROPROPANE	ND	5.6	.42
2-BUTANONE	ND	56	5.7
2-CHLOROETHYL VINYLETHER	ND	56	.19
2-HEXANONE	ND	56	1.4
4-METHYL-2-PENTANONE	ND	56	1.3
ACETONE	ND	56	4.5
BENZENE	ND	5.6	.28
BROMODICHLOROMETHANE	ND	5.6	.29
BROMOFORM	ND	5.6	.31
BROMOMETHANE	ND	5.6	.71
CARBON DISULFIDE	ND	5.6	.14
CARBON TETRACHLORIDE	ND	5.6	.88
CHLORO BENZENE	ND	5.6	.22
CHLOROETHANE	ND	5.6	2
CHLOROFORM	ND	5.6	.47
CHLOROMETHANE	ND	5.6	2.3
CIS-1,2-DICHLOROETHENE	ND	5.6	.32
CIS-1,3-DICHLOROPROPENE	ND	5.6	.25
IBROMOCHLOROMETHANE	ND	5.6	.088
ETHYLBENZENE	ND	5.6	.44
MTBE	ND	11	.41
METHYLENE CHLORIDE	2.7JB	5.6	.45
STYRENE	ND	5.6	.49
TETRACHLOROETHENE	ND	5.6	.27
TOLUENE	ND	5.6	.35
TRANS-1,2-DICHLOROETHENE	ND	5.6	.32
TRANS-1,3-DICHLOROPROPENE	ND	5.6	.74
TRICHLOROETHENE	ND	5.6	.28
VINYL ACETATE	ND	56	.8
VINYL CHLORIDE	ND	5.6	1.1
XYLENES	ND	5.6	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	89	52-149
TOLUENE-D8	94	65-135
BROMOFLUOROBENZENE	94	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

METHOD 5030A/8260A  
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Client      : IT CORPORATION           Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/22/99 15:49
Sample ID   : 20242-1069             Date Analyzed: 12/22/99 15:49
Lab Samp ID : L060-17                Dilution Factor: 1
Lab File ID : RLV457                 Matrix       : SOIL
Ext Btch ID : VOL2901                % Moisture    : 14.8
Calib. Ref.: RLV446                 Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.9	.39
1,1,2,2-TETRACHLOROETHANE	ND	5.9	.39
1,1,2-TRICHLOROETHANE	ND	5.9	.27
1,1-DICHLOROETHANE	ND	5.9	.36
1,1-DICHLOROETHENE	ND	5.9	.63
1,2-DICHLOROETHANE	ND	5.9	.38
1,2-DICHLOROPROPANE	ND	5.9	.44
2-BUTANONE	ND	59	6
2-CHLOROETHYL VINYLETHER	ND	59	.2
2-HEXANONE	ND	59	1.5
4-METHYL-2-PENTANONE	ND	59	1.3
ACETONE	ND	59	4.8
BENZENE	ND	5.9	.29
BROMODICHLOROMETHANE	ND	5.9	.3
BROMOFORM	ND	5.9	.33
BROMOMETHANE	ND	5.9	.75
CARBON DISULFIDE	ND	5.9	.15
CARBON TETRACHLORIDE	ND	5.9	.93
CHLOROBENZENE	ND	5.9	.23
CHLOROETHANE	ND	5.9	2.1
CHLOROFORM	ND	5.9	.5
CHLOROMETHANE	ND	5.9	2.4
CIS-1,2-DICHLOROETHENE	ND	5.9	.34
CIS-1,3-DICHLOROPROPENE	ND	5.9	.26
DIBROMOCHLOROMETHANE	ND	5.9	.093
ETHYLBENZENE	ND	5.9	.46
MTBE	ND	12	.44
METHYLENE CHLORIDE	3.3JB	5.9	.48
STYRENE	ND	5.9	.51
TETRACHLOROETHENE	ND	5.9	.29
TOLUENE	ND	5.9	.37
TRANS-1,2-DICHLOROETHENE	ND	5.9	.34
TRANS-1,3-DICHLOROPROPENE	ND	5.9	.78
TRICHLOROETHENE	ND	5.9	.3
VINYL ACETATE	ND	59	.84
VINYL CHLORIDE	ND	5.9	1.2
XYLENES	ND	5.9	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	93	52-149
TOLUENE-D8	96	65-135
BROMOFLUOROBENZENE	98	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis



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Client       : IT CORPORATION           Date Collected: 12/09/99
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.    : 99L060                  Date Extracted: 12/22/99 16:23
Sample ID    : 20242-1070              Date Analyzed: 12/22/99 16:23
Lab Samp ID  : L060-18                 Dilution Factor: 1
Lab File ID  : RLV458                  Matrix       : SOIL
Ext Btch ID  : VOL2901                 % Moisture   : 7.5
Calib. Ref.  : RLV446                  Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.4	.36
1,1,2,2-TETRACHLOROETHANE	ND	5.4	.36
1,1,2-TRICHLOROETHANE	ND	5.4	.25
1,1-DICHLOROETHANE	ND	5.4	.33
1,1-DICHLOROETHENE	ND	5.4	.58
1,2-DICHLOROETHANE	ND	5.4	.35
1,2-DICHLOROPROPANE	ND	5.4	.41
2-BUTANONE	ND	54	5.5
2-CHLOROETHYL VINYLETHER	ND	54	.18
2-HEXANONE	ND	54	1.3
4-METHYL-2-PENTANONE	ND	54	1.2
ACETONE	ND	54	4.4
BENZENE	ND	5.4	.27
BROMODICHLOROMETHANE	ND	5.4	.28
BROMOFORM	ND	5.4	.3
BROMOMETHANE	ND	5.4	.69
CARBON DISULFIDE	ND	5.4	.14
CARBON TETRACHLORIDE	ND	5.4	.86
CHLOROBENZENE	ND	5.4	.21
CHLOROETHANE	ND	5.4	1.9
CHLOROFORM	ND	5.4	.46
CHLOROMETHANE	ND	5.4	2.2
CIS-1,2-DICHLOROETHENE	ND	5.4	.31
CIS-1,3-DICHLOROPROPENE	ND	5.4	.24
BROMOCHLOROMETHANE	ND	5.4	.085
ETHYLBENZENE	ND	5.4	.42
MTBE	ND	11	.4
METHYLENE CHLORIDE	3.2JB	5.4	.44
STYRENE	ND	5.4	.47
TETRACHLOROETHENE	ND	5.4	.26
TOLUENE	ND	5.4	.34
TRANS-1,2-DICHLOROETHENE	ND	5.4	.31
TRANS-1,3-DICHLOROPROPENE	ND	5.4	.72
TRICHLOROETHENE	ND	5.4	.28
VINYL ACETATE	ND	54	.77
VINYL CHLORIDE	ND	5.4	1.1
XYLENES	ND	5.4	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	88	52-149
TOLUENE-D8	95	65-135
BROMOFLUOROBENZENE	94	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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VOLATILE ORGANICS BY GC/MS

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Client      : IT CORPORATION           Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/23/99 16:18
Sample ID   : 20242-1071             Date Analyzed: 12/23/99 16:18
Lab Samp ID : L060-19                Dilution Factor: 1
Lab File ID : RLW451                 Matrix       : SOIL
Ext Btch ID : VOL2903                % Moisture    : 4.3
Calib. Ref. : RLW446                 Instrument ID : T-006
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.2	.35
1,1,2-TRICHLOROETHANE	ND	5.2	.24
1,1-DICHLOROETHANE	ND	5.2	.32
1,1-DICHLOROETHENE	ND	5.2	.56
1,2-DICHLOROETHANE	ND	5.2	.34
1,2-DICHLOROPROPANE	ND	5.2	.39
2-BUTANONE	ND	52	5.4
2-CHLOROETHYL VINYLETHER	ND	52	.18
2-HEXANONE	ND	52	1.3
4-METHYL-2-PENTANONE	ND	52	1.2
ACETONE	ND	52	4.3
BENZENE	ND	5.2	.26
BROMODICHLOROMETHANE	ND	5.2	.27
BROMOFORM	ND	5.2	.29
BROMOMETHANE	ND	5.2	.67
CARBON DISULFIDE	ND	5.2	.13
CARBON TETRACHLORIDE	ND	5.2	.83
CHLOROBENZENE	ND	5.2	.21
CHLOROETHANE	ND	5.2	1.9
CHLOROFORM	ND	5.2	.44
CHLOROMETHANE	ND	5.2	2.1
CIS-1,2-DICHLOROETHENE	ND	5.2	.3
CIS-1,3-DICHLOROPROPENE	ND	5.2	.23
DIBROMOCHLOROMETHANE	ND	5.2	.083
ETHYLBENZENE	ND	5.2	.41
MTBE	ND	10	.39
METHYLENE CHLORIDE	1.4JB	5.2	.43
STYRENE	ND	5.2	.46
TETRACHLOROETHENE	ND	5.2	.25
TOLUENE	ND	5.2	.33
TRANS-1,2-DICHLOROETHENE	ND	5.2	.3
TRANS-1,3-DICHLOROPROPENE	ND	5.2	.7
TRICHLOROETHENE	ND	5.2	.27
VINYL ACETATE	ND	52	.75
VINYL CHLORIDE	ND	5.2	1.1
XYLENES	ND	5.2	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	107	52-149
TOLUENE-D8	118	65-135
BROMOFLUOROBENZENE	118	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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=====
Client       : IT CORPORATION           Date Collected: 12/09/99
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.    : 99L060                 Date Extracted: 12/23/99 16:57
Sample ID    : 20242-1072              Date Analyzed: 12/23/99 16:57
Lab Samp ID  : L060-20                 Dilution Factor: 1
Lab File ID  : RLW452                  Matrix       : SOIL
Ext Btch ID  : VOL2903                 % Moisture   : 4.0
Calib. Ref.  : RLW446                  Instrument ID : T-006
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	.34
1,1,2,2-TETRACHLOROETHANE	ND	5.2	.34
1,1,2-TRICHLOROETHANE	ND	5.2	.24
1,1-DICHLOROETHANE	ND	5.2	.32
1,1-DICHLOROETHENE	ND	5.2	.56
1,2-DICHLOROETHANE	ND	5.2	.34
1,2-DICHLOROPROPANE	ND	5.2	.39
2-BUTANONE	ND	52	5.3
2-CHLOROETHYL VINYLETHER	ND	52	.18
2-HEXANONE	ND	52	1.3
4-METHYL-2-PENTANONE	ND	52	1.2
ACETONE	ND	52	4.3
BENZENE	ND	5.2	.26
BROMODICHLOROMETHANE	ND	5.2	.27
BROMOFORM	ND	5.2	.29
BROMOMETHANE	ND	5.2	.67
CARBON DISULFIDE	ND	5.2	.13
CARBON TETRACHLORIDE	ND	5.2	.82
CHLOROBENZENE	ND	5.2	.21
CHLOROETHANE	ND	5.2	1.8
CHLOROFORM	ND	5.2	.44
CHLOROMETHANE	ND	5.2	2.1
CIS-1,2-DICHLOROETHENE	ND	5.2	.3
CIS-1,3-DICHLOROPROPENE	ND	5.2	.23
BROMOCHLOROMETHANE	ND	5.2	.082
ETHYLBENZENE	ND	5.2	.41
MTBE	ND	10	.39
METHYLENE CHLORIDE	1.3JB	5.2	.43
STYRENE	ND	5.2	.46
TETRACHLOROETHENE	ND	5.2	.25
TOLUENE	ND	5.2	.33
TRANS-1,2-DICHLOROETHENE	ND	5.2	.3
TRANS-1,3-DICHLOROPROPENE	ND	5.2	.69
TRICHLOROETHENE	ND	5.2	.27
VINYL ACETATE	ND	52	.75
VINYL CHLORIDE	ND	5.2	1.1
XYLENES	ND	5.2	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	115	52-149
TOLUENE-D8	114	65-135
BROMOFLUOROBENZENE	117	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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Client      : IT CORPORATION           Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/22/99 18:04
Sample ID   : 20242-1073             Date Analyzed: 12/22/99 18:04
Lab Samp ID : L060-21                Dilution Factor: 1
Lab File ID : RLV461                 Matrix       : SOIL
Ext Btch ID : BP;2901                % Moisture    : 4.9
Calib. Ref. : RLV446                 Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.3	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.3	.35
1,1,2-TRICHLOROETHANE	ND	5.3	.25
1,1-DICHLOROETHANE	ND	5.3	.32
1,1-DICHLOROETHENE	ND	5.3	.57
1,2-DICHLOROETHANE	ND	5.3	.34
1,2-DICHLOROPROPANE	ND	5.3	.4
2-BUTANONE	ND	53	5.4
2-CHLOROETHYL VINYLETHER	ND	53	.18
2-HEXANONE	ND	53	1.3
4-METHYL-2-PENTANONE	ND	53	1.2
ACETONE	ND	53	4.3
BENZENE	ND	5.3	.26
BROMODICHLOROMETHANE	ND	5.3	.27
BROMOFORM	ND	5.3	.29
BROMOMETHANE	ND	5.3	.67
CARBON DISULFIDE	ND	5.3	.13
CARBON TETRACHLORIDE	ND	5.3	.83
CHLOROBENZENE	ND	5.3	.21
CHLOROETHANE	ND	5.3	1.9
CHLOROFORM	ND	5.3	.45
CHLOROMETHANE	ND	5.3	2.2
CIS-1,2-DICHLOROETHENE	ND	5.3	.31
CIS-1,3-DICHLOROPROPENE	ND	5.3	.23
DIBROMOCHLOROMETHANE	ND	5.3	.083
ETHYLBENZENE	ND	5.3	.41
MTBE	ND	11	.39
METHYLENE CHLORIDE	2.5JB	5.3	.43
STYRENE	ND	5.3	.46
TETRACHLOROETHENE	ND	5.3	.26
TOLUENE	ND	5.3	.33
TRANS-1,2-DICHLOROETHENE	ND	5.3	.3
TRANS-1,3-DICHLOROPROPENE	ND	5.3	.7
TRICHLOROETHENE	ND	5.3	.27
VINYL ACETATE	ND	53	.75
VINYL CHLORIDE	ND	5.3	1.1
XYLENES	ND	5.3	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	74	52-149
TOLUENE-D8	87	65-135
BROMOFLUOROBENZENE	84	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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Client       : IT CORPORATION           Date Collected: 12/09/99
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.    : 99L060                 Date Extracted: 12/22/99 18:38
Sample ID    : 20242-1074             Date Analyzed: 12/22/99 18:38
Lab Samp ID  : L060-22                Dilution Factor: 1
Lab File ID  : RLV462                 Matrix       : SOIL
Ext Btch ID  : VOL2901                % Moisture    : 6.0
Calib. Ref.  : RLV446                 Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.3	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.3	.35
1,1,2-TRICHLOROETHANE	ND	5.3	.25
1,1-DICHLOROETHANE	ND	5.3	.32
1,1-DICHLOROETHENE	ND	5.3	.57
1,2-DICHLOROETHANE	ND	5.3	.35
1,2-DICHLOROPROPANE	ND	5.3	.4
2-BUTANONE	ND	53	5.4
2-CHLOROETHYL VINYLETHER	ND	53	.18
2-HEXANONE	ND	53	1.3
4-METHYL-2-PENTANONE	ND	53	1.2
ACETONE	ND	53	4.4
BENZENE	ND	5.3	.26
BROMODICHLOROMETHANE	ND	5.3	.28
BROMOFORM	ND	5.3	.3
BROMOMETHANE	ND	5.3	.68
CARBON DISULFIDE	ND	5.3	.13
CARBON TETRACHLORIDE	ND	5.3	.84
CHLOROBENZENE	ND	5.3	.21
CHLOROETHANE	ND	5.3	1.9
CHLOROFORM	ND	5.3	.45
CHLOROMETHANE	ND	5.3	2.2
CIS-1,2-DICHLOROETHENE	ND	5.3	.31
CIS-1,3-DICHLOROPROPENE	ND	5.3	.24
BROMOCHLOROMETHANE	ND	5.3	.084
ETHYLBENZENE	ND	5.3	.42
MTBE	ND	11	.39
METHYLENE CHLORIDE	2.8JB	5.3	.44
STYRENE	ND	5.3	.47
TETRACHLOROETHENE	ND	5.3	.26
TOLUENE	ND	5.3	.33
TRANS-1,2-DICHLOROETHENE	ND	5.3	.31
TRANS-1,3-DICHLOROPROPENE	ND	5.3	.71
TRICHLOROETHENE	ND	5.3	.27
VINYL ACETATE	ND	53	.76
VINYL CHLORIDE	ND	5.3	1.1
XYLENES	ND	5.3	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	79	52-149
TOLUENE-D8	93	65-135
BROMOFLUOROBENZENE	87	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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VOLATILE ORGANICS BY GC/MS

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Client      : IT CORPORATION           Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/23/99 01:59
Sample ID   : 20242-1075             Date Analyzed: 12/23/99 01:59
Lab Samp ID : L060-23                Dilution Factor: 1
Lab File ID : RLV475                 Matrix       : SOIL
Ext Btch ID : VOL3001                % Moisture    : 13.7
Calib. Ref. : RLV468                 Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.8	.38
1,1,2,2-TETRACHLOROETHANE	ND	5.8	.38
1,1,2-TRICHLOROETHANE	ND	5.8	.27
1,1-DICHLOROETHANE	ND	5.8	.35
1,1-DICHLOROETHENE	ND	5.8	.62
1,2-DICHLOROETHANE	ND	5.8	.38
1,2-DICHLOROPROPANE	ND	5.8	.44
2-BUTANONE	ND	58	5.9
2-CHLOROETHYL VINYLETHER	ND	58	.2
2-HEXANONE	ND	58	1.4
4-METHYL-2-PENTANONE	ND	58	1.3
ACETONE	ND	58	4.7
BENZENE	ND	5.8	.29
BROMODICHLOROMETHANE	ND	5.8	.3
BROMOFORM	ND	5.8	.32
BROMOMETHANE	ND	5.8	.74
CARBON DISULFIDE	ND	5.8	.15
CARBON TETRACHLORIDE	ND	5.8	.92
CHLOROBENZENE	ND	5.8	.23
CHLOROETHANE	ND	5.8	2.1
CHLOROFORM	ND	5.8	.49
CHLOROMETHANE	ND	5.8	2.4
CIS-1,2-DICHLOROETHENE	ND	5.8	.34
CIS-1,3-DICHLOROPROPENE	ND	5.8	.26
DIBROMOCHLOROMETHANE	ND	5.8	.092
ETHYLBENZENE	ND	5.8	.45
MTBE	ND	12	.43
METHYLENE CHLORIDE	3.5JB	5.8	.47
STYRENE	ND	5.8	.51
TETRACHLOROETHENE	ND	5.8	.28
TOLUENE	ND	5.8	.36
TRANS-1,2-DICHLOROETHENE	ND	5.8	.33
TRANS-1,3-DICHLOROPROPENE	ND	5.8	.77
TRICHLOROETHENE	ND	5.8	.3
VINYL ACETATE	ND	58	.83
VINYL CHLORIDE	ND	5.8	1.2
XYLENES	ND	5.8	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	101	52-149
TOLUENE-D8	90	65-135
BROMOFLUOROBENZENE	91	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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Client      : IT CORPORATION           Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/23/99 02:33
Sample ID   : 20242-1076              Date Analyzed: 12/23/99 02:33
Lab Samp ID : L060-24                 Dilution Factor: 1
Lab File ID : RLV476                  Matrix       : SOIL
Ext Btch ID : VOL3001                 % Moisture    : 11.0
Calib. Ref. : RLV468                  Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.6	.37
1,1,2,2-TETRACHLOROETHANE	ND	5.6	.37
1,1,2-TRICHLOROETHANE	ND	5.6	.26
1,1-DICHLOROETHANE	ND	5.6	.34
1,1-DICHLOROETHENE	ND	5.6	.6
1,2-DICHLOROETHANE	ND	5.6	.37
1,2-DICHLOROPROPANE	ND	5.6	.42
2-BUTANONE	ND	56	5.8
2-CHLOROETHYL VINYLETHER	ND	56	.19
2-HEXANONE	ND	56	1.4
4-METHYL-2-PENTANONE	ND	56	1.3
ACETONE	ND	56	4.6
BENZENE	ND	5.6	.28
BROMODICHLOROMETHANE	ND	5.6	.29
BROMOFORM	ND	5.6	.31
BROMOMETHANE	ND	5.6	.72
CARBON DISULFIDE	ND	5.6	.14
CARBON TETRACHLORIDE	ND	5.6	.89
CHLOROBENZENE	ND	5.6	.22
CHLOROETHANE	ND	5.6	2
CHLOROFORM	ND	5.6	.48
CHLOROMETHANE	ND	5.6	2.3
CIS-1,2-DICHLOROETHENE	ND	5.6	.33
CIS-1,3-DICHLOROPROPENE	ND	5.6	.25
BROMOCHLOROMETHANE	ND	5.6	.089
ETHYLBENZENE	ND	5.6	.44
MTBE	ND	11	.42
METHYLENE CHLORIDE	4.1JB	5.6	.46
STYRENE	ND	5.6	.49
TETRACHLOROETHENE	ND	5.6	.27
TOLUENE	ND	5.6	.35
TRANS-1,2-DICHLOROETHENE	ND	5.6	.32
TRANS-1,3-DICHLOROPROPENE	ND	5.6	.75
TRICHLOROETHENE	ND	5.6	.29
VINYL ACETATE	ND	56	.8
VINYL CHLORIDE	ND	5.6	1.1
XYLENES	ND	5.6	1.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	111	52-149
TOLUENE-D8	94	65-135
BROMOFLUOROBENZENE	93	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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Client      : IT CORPORATION           Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/23/99 03:07
Sample ID   : 20242-1077             Date Analyzed: 12/23/99 03:07
Lab Samp ID : L060-25                Dilution Factor: 1
Lab File ID : RLV477                 Matrix       : SOIL
Ext Btch ID : VOL3001                % Moisture    : 13.2
Calib. Ref. : RLV468                 Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.8	.38
1,1,2,2-TETRACHLOROETHANE	ND	5.8	.38
1,1,2-TRICHLOROETHANE	ND	5.8	.27
1,1-DICHLOROETHANE	ND	5.8	.35
1,1-DICHLOROETHENE	ND	5.8	.62
1,2-DICHLOROETHANE	ND	5.8	.38
1,2-DICHLOROPROPANE	ND	5.8	.43
2-BUTANONE	ND	58	5.9
2-CHLOROETHYL VINYLETHER	ND	58	.2
2-HEXANONE	ND	58	1.4
4-METHYL-2-PENTANONE	ND	58	1.3
ACETONE	ND	58	4.7
BENZENE	ND	5.8	.29
BROMODICHLOROMETHANE	ND	5.8	.3
BROMOFORM	ND	5.8	.32
BROMOMETHANE	ND	5.8	.74
CARBON DISULFIDE	ND	5.8	.15
CARBON TETRACHLORIDE	ND	5.8	.91
CHLORO BENZENE	ND	5.8	.23
CHLOROETHANE	ND	5.8	.2
CHLOROFORM	ND	5.8	.49
CHLOROMETHANE	ND	5.8	2.4
CIS-1,2-DICHLOROETHENE	ND	5.8	.34
CIS-1,3-DICHLOROPROPENE	ND	5.8	.26
DIBROMOCHLOROMETHANE	ND	5.8	.091
ETHYLBENZENE	ND	5.8	.45
MTBE	ND	12	.43
METHYLENE CHLORIDE	4.2JB	5.8	.47
STYRENE	ND	5.8	.5
TETRACHLOROETHENE	ND	5.8	.28
TOLUENE	ND	5.8	.36
TRANS-1,2-DICHLOROETHENE	ND	5.8	.33
TRANS-1,3-DICHLOROPROPENE	ND	5.8	.77
TRICHLOROETHENE	ND	5.8	.29
VINYL ACETATE	ND	58	.82
VINYL CHLORIDE	ND	5.8	1.2
XYLENES	ND	5.8	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	123	52-149
TOLUENE-D8	89	65-135
BROMOFLUOROBENZENE	86	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis



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Client      : IT CORPORATION          Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/23/99 03:40
Sample ID   : 20242-1078             Date Analyzed: 12/23/99 03:40
Lab Samp ID : L060-26                 Dilution Factor: 1
Lab File ID : RLV478                  Matrix       : SOIL
Ext Btch ID : VOL3001                 % Moisture    : 4.4
Calib. Ref. : RLV468                  Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	.35
1,1,2,2-TETRACHLOROETHANE	ND	5.2	.35
1,1,2-TRICHLOROETHANE	ND	5.2	.24
1,1-DICHLOROETHANE	ND	5.2	.32
1,1-DICHLOROETHENE	ND	5.2	.56
1,2-DICHLOROETHANE	ND	5.2	.34
1,2-DICHLOROPROPANE	ND	5.2	.39
2-BUTANONE	ND	52	5.4
2-CHLOROETHYL VINYLETHER	ND	52	.18
2-HEXANONE	ND	52	1.3
4-METHYL-2-PENTANONE	ND	52	1.2
ACETONE	ND	52	4.3
BENZENE	ND	5.2	.26
BROMODICHLOROMETHANE	ND	5.2	.27
BROMOFORM	ND	5.2	.29
BROMOMETHANE	ND	5.2	.67
CARBON DISULFIDE	ND	5.2	.13
CARBON TETRACHLORIDE	ND	5.2	.83
CHLOROETHANE	ND	5.2	.21
CHLOROETHENE	ND	5.2	1.9
CHLOROFORM	ND	5.2	.44
CHLOROMETHANE	ND	5.2	2.2
CIS-1,2-DICHLOROETHENE	ND	5.2	.3
CIS-1,3-DICHLOROPROPENE	ND	5.2	.23
IBROMOCHLOROMETHANE	ND	5.2	.083
ETHYLBENZENE	ND	5.2	.41
MTBE	ND	10	.39
METHYLENE CHLORIDE	3JB	5.2	.43
STYRENE	ND	5.2	.46
TETRACHLOROETHENE	ND	5.2	.25
TOLUENE	ND	5.2	.33
TRANS-1,2-DICHLOROETHENE	ND	5.2	.3
TRANS-1,3-DICHLOROPROPENE	ND	5.2	.7
TRICHLOROETHENE	ND	5.2	.27
VINYL ACETATE	ND	52	.75
VINYL CHLORIDE	ND	5.2	1.1
XYLENES	ND	5.2	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	115	52-149
TOLUENE-D8	91	65-135
BROMOFLUOROBENZENE	91	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

METHOD 5030A/8260A  
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Client      : IT CORPORATION           Date Collected: 12/09/99
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No.   : 99L060                 Date Extracted: 12/23/99 04:14
Sample ID: 20242-1079                Date Analyzed: 12/23/99 04:14
Lab Samp ID: L060-27                 Dilution Factor: 1
Lab File ID: RLV479                  Matrix      : SOIL
Ext Btch ID: VOL3001                 % Moisture   : 14.1
Calib. Ref.: RLV468                  Instrument ID : T-001
=====
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.8	.39
1,1,2,2-TETRACHLOROETHANE	ND	5.8	.39
1,1,2-TRICHLOROETHANE	ND	5.8	.27
1,1-DICHLOROETHANE	ND	5.8	.35
1,1-DICHLOROETHENE	ND	5.8	.63
1,2-DICHLOROETHANE	ND	5.8	.38
1,2-DICHLOROPROPANE	ND	5.8	.44
2-BUTANONE	ND	58	6
2-CHLOROETHYLVINYLETHER	ND	58	.2
2-HEXANONE	ND	58	1.5
4-METHYL-2-PENTANONE	ND	58	1.3
ACETONE	ND	58	4.8
BENZENE	ND	5.8	.29
BROMODICHLOROMETHANE	ND	5.8	.3
BROMOFORM	ND	5.8	.32
BROMOMETHANE	ND	5.8	.74
CARBON DISULFIDE	ND	5.8	.15
CARBON TETRACHLORIDE	ND	5.8	.92
CHLOROBENZENE	ND	5.8	.23
CHLOROETHANE	ND	5.8	2.1
CHLOROFORM	ND	5.8	.49
CHLOROMETHANE	ND	5.8	2.4
CIS-1,2-DICHLOROETHENE	ND	5.8	.34
CIS-1,3-DICHLOROPROPENE	ND	5.8	.26
DIBROMOCHLOROMETHANE	ND	5.8	.092
ETHYLBENZENE	ND	5.8	.46
MTBE	ND	12	.43
METHYLENE CHLORIDE	3.4JB	5.8	.48
STYRENE	ND	5.8	.51
TETRACHLOROETHENE	ND	5.8	.28
TOLUENE	ND	5.8	.37
TRANS-1,2-DICHLOROETHENE	ND	5.8	.34
TRANS-1,3-DICHLOROPROPENE	ND	5.8	.78
TRICHLOROETHENE	ND	5.8	.3
VINYL ACETATE	ND	58	.83
VINYL CHLORIDE	ND	5.8	1.2
XYLENES	ND	5.8	1.3

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	91	52-149
TOLUENE-D8	91	65-135
BROMOFLUOROBENZENE	88	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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Client   : IT CORPORATION           Date Collected: 12/09/99
Project  : MCAS EL TORO/20242/D.O. 112 Date Received: 12/10/99
Batch No. : 99L060                 Date Extracted: 12/21/99 21:43
Sample ID: 20242-1080              Date Analyzed: 12/21/99 21:43
Lab Samp ID: L060-28               Dilution Factor: 1
Lab File ID: RLV431                Matrix       : WATER
Ext Btch ID: VOL2801               % Moisture    : NA
Calib. Ref.: RLV425                Instrument ID : T-001
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PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	1.1
1,1,2,2-TETRACHLOROETHANE	ND	5	.49
1,1,2-TRICHLOROETHANE	ND	5	.52
1,1-DICHLOROETHANE	ND	5	1.2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	.58
1,2-DICHLOROPROPANE	ND	5	.53
2-BUTANONE	ND	50	7.9
2-CHLOROETHYL VINYLETHER	ND	50	.83
2-HEXANONE	ND	50	1
4-METHYL-2-PENTANONE	ND	50	1
ACETONE	ND	50	10
BENZENE	ND	5	.85
BROMODICHLOROMETHANE	ND	5	.33
BROMOFORM	ND	5	.29
BROMOMETHANE	ND	5	1.5
CARBON DISULFIDE	ND	5	1.3
CARBON TETRACHLORIDE	ND	5	1.3
CHLORO BENZENE	ND	5	.68
CHLOROETHANE	ND	5	2.9
CHLOROFORM	ND	5	.85
CHLOROMETHANE	ND	5	1.7
CIS-1,2-DICHLOROETHENE	ND	5	.97
CIS-1,3-DICHLOROPROPENE	ND	5	.47
IBROMOCHLOROMETHANE	ND	5	.29
ETHYLBENZENE	ND	5	.72
MTBE	ND	10	.96
METHYLENE CHLORIDE	ND	5	1.8
STYRENE	ND	5	.58
TETRACHLOROETHENE	ND	5	1.2
TOLUENE	ND	5	.92
TRANS-1,2-DICHLOROETHENE	ND	5	1.5
TRANS-1,3-DICHLOROPROPENE	ND	5	.45
TRICHLOROETHENE	ND	5	.9
VINYL ACETATE	ND	50	6.2
VINYL CHLORIDE	ND	5	1.7
XYLENES	ND	5	2.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	87	62-139
TOLUENE-D8	96	75-125
BROMOFLUOROBENZENE	94	75-125

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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Client      : IT CORPORATION           Date Collected: NA
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/21/99
Batch No.   : 99L060                 Date Extracted: 12/21/99 20:36
Sample ID   : MBLK1W                  Date Analyzed: 12/21/99 20:36
Lab Samp ID : VOL2801Q                Dilution Factor: 1
Lab File ID : RLV429                  Matrix       : WATER
Ext Btch ID : VOL2801                 % Moisture    : NA
Calib. Ref. : RLV425                  Instrument ID : T-001
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PARAMETERS	RESULTS (ug/L)	PRL (ug/L)	MDL (ug/L)
1,1,1-TRICHLOROETHANE	ND	5	1.1
1,1,2,2-TETRACHLOROETHANE	ND	5	.49
1,1,2-TRICHLOROETHANE	ND	5	.52
1,1-DICHLOROETHANE	ND	5	1.2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	.58
1,2-DICHLOROPROPANE	ND	5	.53
2-BUTANONE	ND	50	7.9
2-CHLOROETHYL VINYLETHER	ND	50	.83
2-HEXANONE	ND	50	1
4-METHYL-2-PENTANONE	ND	50	1
ACETONE	ND	50	10
BENZENE	ND	5	.85
BROMODICHLOROMETHANE	ND	5	.33
BROMOFORM	ND	5	.29
BROMOMETHANE	ND	5	1.5
CARBON DISULFIDE	ND	5	1.3
CARBON TETRACHLORIDE	ND	5	1.3
CHLOROBENZENE	ND	5	.68
CHLOROETHANE	ND	5	2.9
CHLOROFORM	ND	5	.85
CHLOROMETHANE	ND	5	1.7
CIS-1,2-DICHLOROETHENE	ND	5	.97
CIS-1,3-DICHLOROPROPENE	ND	5	.47
DIBROMOCHLOROMETHANE	ND	5	.29
ETHYLBENZENE	ND	5	.72
MTBE	ND	10	.96
METHYLENE CHLORIDE	2.6J	5	1.8
STYRENE	ND	5	.58
TETRACHLOROETHENE	ND	5	1.2
TOLUENE	ND	5	.92
TRANS-1,2-DICHLOROETHENE	ND	5	1.5
TRANS-1,3-DICHLOROPROPENE	ND	5	.45
TRICHLOROETHENE	ND	5	.9
VINYL ACETATE	ND	50	6.2
VINYL CHLORIDE	ND	5	1.7
XYLENES	ND	5	2.4

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	89	62-139
TOLUENE-D8	95	75-125
BROMOFLUOROBENZENE	96	75-125

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

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METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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=====
Client      : IT CORPORATION           Date Collected: NA
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/21/99
Batch No.   : 99L060                 Date Extracted: 12/21/99 20:36
Sample ID   : MBLK1S                 Date Analyzed: 12/21/99 20:36
Lab Samp ID : VOL2801Q               Dilution Factor: 1
Lab File ID : RLV429                 Matrix          : SOIL
Ext Btch ID : VOL2801                % Moisture       : NA
Calib. Ref.: RLV425                 Instrument ID    : T-001
=====

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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	.33
1,1,2,2-TETRACHLOROETHANE	ND	5	.33
1,1,2-TRICHLOROETHANE	ND	5	.23
1,1-DICHLOROETHANE	ND	5	.3
1,1-DICHLOROETHENE	ND	5	.54
1,2-DICHLOROETHANE	ND	5	.33
1,2-DICHLOROPROPANE	ND	5	.38
2-BUTANONE	ND	50	5.1
2-CHLOROETHYL VINYLETHER	ND	50	.17
2-HEXANONE	ND	50	1.2
4-METHYL-2-PENTANONE	ND	50	1.1
ACETONE	ND	50	4.1
BENZENE	ND	5	.25
BROMODICHLOROMETHANE	ND	5	.26
BROMOFORM	ND	5	.28
BROMOMETHANE	ND	5	.64
BON DISULFIDE	ND	5	.13
CARBON TETRACHLORIDE	ND	5	.79
CHLOROBENZENE	ND	5	.2
CHLOROETHANE	ND	5	1.8
CHLOROFORM	ND	5	.42
CHLOROMETHANE	ND	5	2.1
CIS-1,2-DICHLOROETHENE	ND	5	.29
CIS-1,3-DICHLOROPROPENE	ND	5	.22
DIBROMOCHLOROMETHANE	ND	5	.079
ETHYLBENZENE	ND	5	.39
MTBE	ND	10	.37
METHYLENE CHLORIDE	2.6J	5	.41
STYRENE	ND	5	.44
TETRACHLOROETHENE	ND	5	.24
TOLUENE	ND	5	.31
TRANS-1,2-DICHLOROETHENE	ND	5	.29
TRANS-1,3-DICHLOROPROPENE	ND	5	.67
TRICHLOROETHENE	ND	5	.25
VINYL ACETATE	ND	50	.72
VINYL CHLORIDE	ND	5	1
XYLENES	ND	5	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	89	52-149
TOLUENE-D8	95	65-135
BROMOFLUOROBENZENE	96	65-135

: Project Reporting Limit  
 : Out side of QC Limit  
 J : An estimated value between PRL and MDL  
 E : Value exceed the upper level of the initial calibration  
 B : Found in the associated blank

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METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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=====
Client      : IT CORPORATION           Date Collected: NA
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/22/99
Batch No.   : 99L060                 Date Extracted: 12/22/99 11:44
Sample ID   : MBLK2S                  Date Analyzed: 12/22/99 11:44
Lab Samp ID : VOL2901Q                Dilution Factor: 1
Lab File ID : RLV450                  Matrix       : SOIL
Ext Btch ID : VOL2901                 % Moisture    : NA
Calib. Ref. : RLV446                  Instrument ID : T-001
=====

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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	.33
1,1,2,2-TETRACHLOROETHANE	ND	5	.33
1,1,2-TRICHLOROETHANE	ND	5	.23
1,1-DICHLOROETHANE	ND	5	.3
1,1-DICHLOROETHENE	ND	5	.54
1,2-DICHLOROETHANE	ND	5	.33
1,2-DICHLOROPROPANE	ND	5	.38
2-BUTANONE	ND	50	5.1
2-CHLOROETHYL VINYLETHER	ND	50	.17
2-HEXANONE	ND	50	1.2
4-METHYL-2-PENTANONE	ND	50	1.1
ACETONE	ND	50	4.1
BENZENE	ND	5	.25
BROMODICHLOROMETHANE	ND	5	.26
BROMOFORM	ND	5	.28
BROMOMETHANE	ND	5	.64
CARBON DISULFIDE	ND	5	.13
CARBON TETRACHLORIDE	ND	5	.79
CHLOROBENZENE	ND	5	.2
CHLOROETHANE	ND	5	1.8
CHLOROFORM	ND	5	.42
CHLOROMETHANE	ND	5	2.1
CIS-1,2-DICHLOROETHENE	ND	5	.29
CIS-1,3-DICHLOROPROPENE	ND	5	.22
DIBROMOCHLOROMETHANE	ND	5	.079
ETHYLBENZENE	ND	5	.39
MTBE	ND	10	.37
METHYLENE CHLORIDE	1.2J	5	.41
STYRENE	ND	5	.44
TETRACHLOROETHENE	ND	5	.24
TOLUENE	ND	5	.31
TRANS-1,2-DICHLOROETHENE	ND	5	.29
TRANS-1,3-DICHLOROPROPENE	ND	5	.67
TRICHLOROETHENE	ND	5	.25
VINYL ACETATE	ND	50	.72
VINYL CHLORIDE	ND	5	1
XYLENES	ND	5	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	86	52-149
TOLUENE-D8	95	65-135
BROMOFLUOROBENZENE	96	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
BATCH NO.: 99L060  
METHOD: METHOD 5030A/8260A

MATRIX: SOIL  
DILUTION FACTOR: 1 1 1 % MOISTURE: NA  
SAMPLE ID: MBLK2S  
LAB SAMP ID: VOL2901Q VOL2901L VOL2901C  
LAB FILE ID: RLV450 RLV447 RLV463  
DATE EXTRACTED: 12/22/9911:44 12/22/9910:02 12/22/9919:12 DATE COLLECTED: NA  
DATE ANALYZED: 12/22/9911:44 12/22/9910:02 12/22/9919:12 DATE RECEIVED: 12/22/99  
PREP. BATCH: VOL2903 VOL2903 VOL2903  
CALIB. REF: RLV446 RLV446 RLV446

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD ( % )	QC LIMIT ( % )	MAX RPD ( % )
1,1-Dichloroethene	ND	20	17.6	88	20	19.7	99	12	65-135	30
Benzene	ND	20	19.2	96	20	20.3	102	5	65-135	30
Chlorobenzene	ND	20	19.3	96	20	20.5	102	6	65-135	30
Toluene	ND	20	19.6	98	20	19.5	98	0	64-135	30
Trichloroethene	ND	20	20.2	101	20	24.3	121	18	61-135	30

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT ( % )
1,2-Dichloroethane-d4	50	43	86	50	44.6	89	52-149
Toluene-d8	50	46.6	93	50	46.2	92	65-135
Bromofluorobenzene	50	47.3	95	50	46	92	65-135

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
BATCH NO.: 99L060  
METHOD: METHOD 5030A/8260A

MATRIX: WATER  
DILUTION FACTOR: 1 1 1 % MOISTURE: NA  
SAMPLE ID: MBLK1W  
LAB SAMP ID: VOL2801Q VOL2801L VOL2801C  
LAB FILE ID: RLV429 RLV426 RLV427  
DATE EXTRACTED: 12/21/9920:36 12/21/9918:54 12/21/9919:28 DATE COLLECTED: NA  
DATE ANALYZED: 12/21/9920:36 12/21/9918:54 12/21/9919:28 DATE RECEIVED: 12/21/99  
PREP. BATCH: VOL2801 VOL2801 VOL2801  
CALIB. REF: RLV425 RLV425 RLV425

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD ( % )	QC LIMIT ( % )	MAX RPD ( % )
1,1-Dichloroethene	ND	20	20.6	103	20	20.9	105	2	75-125	20
Benzene	ND	20	21.5	108	20	21.1	105	2	75-125	20
Chlorobenzene	ND	20	21.2	106	20	21.1	105	1	75-125	20
Toluene	ND	20	21.1	105	20	21.2	106	1	74-125	20
Trichloroethene	ND	20	21.2	106	20	21.9	110	3	71-125	20

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT ( % )
1,2-Dichloroethane-d4	50	47.9	96	50	48.1	96	62-139
Toluene-d8	50	49.7	99	50	49.8	100	75-125
Bromofluorobenzene	50	49.8	100	50	50.7	101	75-125



EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
BATCH NO.: 99L060  
METHOD: METHOD 5030A/8260A

MATRIX: SOIL  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: MBLK1S  
LAB SAMP ID: VOL2801Q VOL2801L VOL2801C  
LAB FILE ID: RLV429 RLV426 RLV427  
DATE EXTRACTED: 12/21/9920:36 12/21/9918:54 12/21/9919:28 DATE COLLECTED: NA  
DATE ANALYZED: 12/21/9920:36 12/21/9918:54 12/21/9919:28 DATE RECEIVED: 12/21/99  
PREP. BATCH: VOL2903 VOL2903 VOL2903  
CALIB. REF: RLV425 RLV425 RLV425

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD ( % )	QC LIMIT ( % )	MAX RPD ( % )
1,1-Dichloroethene	ND	20	20.6	103	20	20.9	105	2	65-135	30
Benzene	ND	20	21.5	108	20	21.1	105	2	65-135	30
Chlorobenzene	ND	20	21.2	106	20	21.1	105	1	65-135	30
Toluene	ND	20	21.1	105	20	21.2	106	1	64-135	30
Trichloroethene	ND	20	21.2	106	20	21.9	110	3	61-135	30

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT ( % )
1,2-Dichloroethane-d4	50	47.9	96	50	48.1	96	52-149
Toluene-d8	50	49.7	99	50	49.8	100	65-135
Bromofluorobenzene	50	49.8	100	50	50.7	101	65-135

METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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=====
Client       : IT CORPORATION           Date Collected: NA
Project      : MCAS EL TORO/20242/D.O. 112 Date Received: 12/23/99
Batch No.    : 99L060                  Date Extracted: 12/23/99 00:18
Sample ID    : MBLK3S                   Date Analyzed: 12/23/99 00:18
Lab Samp ID  : VOL3001Q                 Dilution Factor: 1
Lab File ID  : RLV472                   Matrix       : SOIL
Ext Btch ID  : VOL3001                  % Moisture    : NA
Calib. Ref.  : RLV468                   Instrument ID : T-001
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	.33
1,1,2,2-TETRACHLOROETHANE	ND	5	.33
1,1,2-TRICHLOROETHANE	ND	5	.23
1,1-DICHLOROETHANE	ND	5	.3
1,1-DICHLOROETHENE	ND	5	.54
1,2-DICHLOROETHANE	ND	5	.33
1,2-DICHLOROPROPANE	ND	5	.38
2-BUTANONE	ND	50	5.1
2-CHLOROETHYL VINYLETHER	ND	50	.17
2-HEXANONE	ND	50	1.2
4-METHYL-2-PENTANONE	ND	50	1.1
ACETONE	ND	50	4.1
BENZENE	ND	5	.25
BROMODICHLOROMETHANE	ND	5	.26
BROMOFORM	ND	5	.28
BROMOMETHANE	ND	5	.64
CARBON DISULFIDE	ND	5	.13
CARBON TETRACHLORIDE	ND	5	.79
CHLOROBENZENE	ND	5	.2
CHLOROETHANE	ND	5	1.8
CHLOROFORM	ND	5	.42
CHLOROMETHANE	ND	5	2.1
CIS-1,2-DICHLOROETHENE	ND	5	.29
CIS-1,3-DICHLOROPROPENE	ND	5	.22
DIBROMOCHLOROMETHANE	ND	5	.079
ETHYLBENZENE	ND	5	.39
MTBE	ND	10	.37
METHYLENE CHLORIDE	2.4J	5	.41
STYRENE	ND	5	.44
TETRACHLOROETHENE	ND	5	.24
TOLUENE	ND	5	.31
TRANS-1,2-DICHLOROETHENE	ND	5	.29
TRANS-1,3-DICHLOROPROPENE	ND	5	.67
TRICHLOROETHENE	ND	5	.25
VINYL ACETATE	ND	50	.72
VINYL CHLORIDE	ND	5	1
XYLENES	ND	5	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	103	52-149
TOLUENE-D8	95	65-135
BROMOFLUOROBENZENE	94	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

2014

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
BATCH NO.: 99L060  
METHOD: METHOD 5030A/8260A

MATRIX: SOIL  
DILUTION FACTOR: 1 1  
SAMPLE ID: MBLK3S  
LAB SAMP ID: VOL3001Q VOL3001L VOL3001C  
LAB FILE ID: RLV472 RLV469 RLV470  
DATE EXTRACTED: 12/23/9900:18 12/22/9922:36 12/22/9923:10  
DATE ANALYZED: 12/23/9900:18 12/22/9922:36 12/22/9923:10  
PREP. BATCH: VOL2903 VOL2903 VOL2903  
CALIB. REF: RLV468 RLV468 RLV468

% MOISTURE: NA

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD ( % )	QC LIMIT ( % )	MAX RPD ( % )
1,1-Dichloroethene	ND	20	19.6	98	20	20.7	103	5	65-135	30
Benzene	ND	20	19.9	100	20	20.9	105	5	65-135	30
Chlorobenzene	ND	20	19.8	99	20	20.1	101	1	65-135	30
Toluene	ND	20	19.1	96	20	18.8	94	1	64-135	30
Trichloroethene	ND	20	22.7	113	20	23.1	115	2	61-135	30

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT ( % )
1,2-Dichloroethane-d4	50	47	94	50	46.1	92	52-149
Toluene-d8	50	47.5	95	50	45.4	91	65-135
Bromofluorobenzene	50	47	94	50	45.6	91	65-135

METHOD 5030A/8260A  
VOLATILE ORGANICS BY GC/MS

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=====
Client      : IT CORPORATION          Date Collected: NA
Project     : MCAS EL TORO/20242/D.O. 112 Date Received: 12/23/99
Batch No.   : 99L060                 Date Extracted: 12/23/99 15:33
Sample ID   : MBLK4S                 Date Analyzed: 12/23/99 15:33
Lab Samp ID : VOL2903Q               Dilution Factor: 1
Lab File ID : RLW450                 Matrix       : SOIL
Ext Btch ID : VOL2903                % Moisture   : NA
Calib. Ref. : RLW446                 Instrument ID : T-006
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PARAMETERS	RESULTS (ug/kg)	PRL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	.33
1,1,2,2-TETRACHLOROETHANE	ND	5	.33
1,1,2-TRICHLOROETHANE	ND	5	.23
1,1-DICHLOROETHANE	ND	5	.3
1,1-DICHLOROETHENE	ND	5	.54
1,2-DICHLOROETHANE	ND	5	.33
1,2-DICHLOROPROPANE	ND	5	.38
2-BUTANONE	ND	50	5.1
2-CHLOROETHYL VINYL ETHER	ND	50	.17
2-HEXANONE	ND	50	1.2
4-METHYL-2-PENTANONE	ND	50	1.1
ACETONE	ND	50	4.1
BENZENE	ND	5	.25
BROMODICHLOROMETHANE	ND	5	.26
BROMOFORM	ND	5	.28
BROMOMETHANE	ND	5	.64
CARBON DISULFIDE	ND	5	.13
CARBON TETRACHLORIDE	ND	5	.79
CHLOROBENZENE	ND	5	.2
CHLOROETHANE	ND	5	1.8
CHLOROFORM	ND	5	.42
CHLOROMETHANE	ND	5	2.1
CIS-1,2-DICHLOROETHENE	ND	5	.29
CIS-1,3-DICHLOROPROPENE	ND	5	.22
DIBROMOCHLOROMETHANE	ND	5	.079
ETHYLBENZENE	ND	5	.39
MTBE	ND	10	.37
METHYLENE CHLORIDE	1.9J	5	.41
STYRENE	ND	5	.44
TETRACHLOROETHENE	ND	5	.24
TOLUENE	ND	5	.31
TRANS-1,2-DICHLOROETHENE	ND	5	.29
TRANS-1,3-DICHLOROPROPENE	ND	5	.67
TRICHLOROETHENE	ND	5	.25
VINYL ACETATE	ND	50	.72
VINYL CHLORIDE	ND	5	1
XYLENES	ND	5	1.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	102	52-149
TOLUENE-D8	108	65-135
BROMOFLUOROBENZENE	103	65-135

PRL: Project Reporting Limit

\* : Out side of QC Limit

J : An estimated value between PRL and MDL

E : Value exceed the upper level of the initial calibration

B : Found in the associated blank

D : Value from dilution analysis

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
BATCH NO.: 99L060  
METHOD: METHOD 5030A/8260A

MATRIX: SOIL  
DILUTION FACTOR: 1 1 1 % MOISTURE: NA  
SAMPLE ID: MBLK4S  
LAB SAMP ID: VOL2903a VOL2903L VOL2903C  
LAB FILE ID: RLW450 RLW447 RLW448  
DATE EXTRACTED: 12/23/9915:33 12/23/9913:29 12/23/9914:08 DATE COLLECTED: NA  
DATE ANALYZED: 12/23/9915:33 12/23/9913:29 12/23/9914:08 DATE RECEIVED: 12/23/99  
PREP. BATCH: VOL2903 VOL2903 VOL2903  
CALIB. REF: RLW446 RLW446 RLW446

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD ( % )	QC LIMIT ( % )	MAX RPD ( % )
1,1-Dichloroethene	ND	20	19.4	97	20	19.7	98	2	65-135	30
Benzene	ND	20	22.1	110	20	23.1	115	4	65-135	30
Chlorobenzene	ND	20	22.6	113	20	23.9	120	6	65-135	30
Toluene	ND	20	24.7	123	20	26.4	132	7	64-135	30
Trichloroethene	ND	20	19.8	99	20	20	100	1	61-135	30

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT ( % )
1,2-Dichloroethane-d4	50	43.6	87	50	44.8	90	52-149
Toluene-d8	50	58.2	116	50	61.7	123	65-135
Bromofluorobenzene	50	61.5	123	50	66.3	133	65-135

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
BATCH NO.: 99L060  
METHOD: METHOD 5030A/8260A

MATRIX: SOIL % MOISTURE: 10.3  
DILUTION FACTOR: 1 1  
SAMPLE ID: 20242-1064  
LAB SAMP ID: L060-12 L060-12M L060-12S  
LAB FILE ID: RLV442 RLV443 RLV444  
DATE EXTRACTED: 12/22/9903:57 12/22/9904:30 12/22/9905:04 DATE COLLECTED: 12/09/99  
DATE ANALYZED: 12/22/9903:57 12/22/9904:30 12/22/9905:04 DATE RECEIVED: 12/10/99  
PREP. BATCH: VOL2801 VOL2801 VOL2801  
CALIB. REF: RLV425 RLV425 RLV425

ACCESSION:

PARAMETER	SMPL RSLT (ug/kg)	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	SPIKE AMT (ug/kg)	MSD RSLT (ug/kg)	MSD % REC	RPD ( % )	QC LIMIT ( % )	MAX RPD ( % )
1,1-Dichloroethene	ND	55.7	52.4	94	55.7	49.2	88	6	65-135	30
Benzene	ND	55.7	56.5	101	55.7	52.6	94	7	65-135	30
Chlorobenzene	ND	55.7	57.3	103	55.7	52.8	95	8	65-135	30
Toluene	ND	55.7	55.7	100	55.7	51.4	92	8	64-135	30
Trichloroethene	ND	55.7	60.4	108	55.7	55.4	99	9	61-135	30

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	SPIKE AMT (ug/kg)	MSD RSLT (ug/kg)	MSD % REC	QC LIMIT ( % )
1,2-Dichloroethane-d4	55.7	48.8	88	55.7	49.2	88	52-149
Toluene-d8	55.7	53.7	96	55.7	52.7	95	65-135
Bromofluorobenzene	55.7	52.9	95	55.7	52	93	65-135

\* : Out side of QC Limit

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
ATCH NO.: 99L060  
METHOD: METHOD 5030A/8260A

MATRIX: SOIL % MOISTURE: 14.1  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: 20242-1079  
LAB SAMP ID: L060-27 L060-27M L060-27S  
LAB FILE ID: RLV479 RLV487 RLV488  
DATE EXTRACTED: 12/23/9904:14 12/23/9908:47 12/23/9909:20 DATE COLLECTED: 12/09/99  
DATE ANALYZED: 12/23/9904:14 12/23/9908:47 12/23/9909:20 DATE RECEIVED: 12/10/99  
PREP. BATCH: VOL3001 VOL3001 VOL3001  
CALIB. REF: RLV468 RLV468 RLV468

ACCESSION:

PARAMETER	SMPL RSLT (ug/kg)	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	SPIKE AMT (ug/kg)	MSD RSLT (ug/kg)	MSD % REC	RPD ( % )	QC LIMIT ( % )	MAX RPD ( % )
1,1-Dichloroethene	ND	58.2	67.3	116	58.2	74.2	127	10	65-135	30
Benzene	ND	58.2	59	101	58.2	58.8	101	0	65-135	30
Chlorobenzene	ND	58.2	58.9	101	58.2	56.3	97	5	65-135	30
Toluene	ND	58.2	55.9	96	58.2	54.6	94	2	64-135	30
Trichloroethene	ND	58.2	66.3	114	58.2	65.9	113	1	61-135	30

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	SPIKE AMT (ug/kg)	MSD RSLT (ug/kg)	MSD % REC	QC LIMIT ( % )
1,2-Dichloroethane-d4	58.2	54.4	93	58.2	62.6	108	52-149
Toluene-d8	58.2	54.2	93	58.2	54.6	94	65-135
Bromofluorobenzene	58.2	55.1	95	58.2	53.1	91	65-135

\* : Out side of QC Limit

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
BATCH NO.: 99L060  
METHOD: METHOD 5030A/8260A

MATRIX: SOIL % MOISTURE: 4.0  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: 20242-1072  
LAB SAMP ID: L060-20 L060-20M L060-20S  
LAB FILE ID: RLW452 RLV464 RLV465  
DATE EXTRACTED: 12/23/9916:57 12/22/9919:47 12/22/9920:21 DATE COLLECTED: 12/09/99  
DATE ANALYZED: 12/23/9916:57 12/22/9919:47 12/22/9920:21 DATE RECEIVED: 12/10/99  
PREP. BATCH: VOL2903 VOL2903 VOL2903  
CALIB. REF: RLW446 RLV446 RLV446

ACCESSION:

PARAMETER	SMPL RSLT (ug/kg)	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	SPIKE AMT (ug/kg)	MSD RSLT (ug/kg)	MSD % REC	RPD ( % )	QC LIMIT ( % )	MAX RPD ( % )
1,1-Dichloroethene	ND	52.1	42.1	81	52.1	52.6	101	22	65-135	30
Benzene	ND	52.1	47.7	92	52.1	50.5	97	6	65-135	30
Chlorobenzene	ND	52.1	48.3	93	52.1	49.5	95	3	65-135	30
Toluene	ND	52.1	46.9	90	52.1	44.4	85	5	64-135	30
Trichloroethene	ND	52.1	53.8	103	52.1	57.4	110	6	61-135	30

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	MS RSLT (ug/kg)	MS % REC	SPIKE AMT (ug/kg)	MSD RSLT (ug/kg)	MSD % REC	QC LIMIT ( % )
1,2-Dichloroethane-d4	52.1	38.5	74	52.1	47.6	91	52-149
Toluene-d8	52.1	47.1	91	52.1	46.7	90	65-135
Bromofluorobenzene	52.1	49.1	94	52.1	48.7	93	65-135

\* : Out side of QC Limit



METHOD 5030B/M8015  
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

Client : IT CORPORATION  
Project : MCAS EL TORO/20242/D.O. 112  
Batch No. : 99L060

Matrix : SOIL  
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SURR (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	VAL2339B	ND	85	1	NA	1	.02	12/14/9918:30	12/14/9918:30	EL09-3	EL09-2	VAL2339	NA	NA
LCS1S	VAL2339L	5.53	86	1	NA	1	.02	12/14/9919:06	12/14/9919:06	EL09-4	EL09-2	VAL2339	NA	NA
LCD1S	VAL2339C	5.35	94	1	NA	1	.02	12/14/9919:41	12/14/9919:41	EL09-5	EL09-2	VAL2339	NA	NA
MBLK2S	VAL2439B	ND	83	1	NA	1	.02	12/15/9909:34	12/15/9909:34	EL09-29	EL09-25	VAL2439	NA	NA
LCS2S	VAL2439L	6.16	97	1	NA	1	.02	12/15/9910:09	12/15/9910:09	EL09-30	EL09-25	VAL2439	NA	NA
LCD2S	VAL2439C	4.42	61	1	NA	1	.02	12/15/9910:43	12/15/9910:43	EL09-31	EL09-25	VAL2439	NA	NA
MBLK3S	VAL2639B	ND	71	1	NA	1	.02	12/16/9902:44	12/16/9902:44	EL10-23	EL10-14	VAL2639	NA	NA
LCS3S	VAL2639L	5.33	85	1	NA	1	.02	12/16/9903:19	12/16/9903:19	EL10-24	EL10-14	VAL2639	NA	NA
LCD3S	VAL2639C	4.67	83	1	NA	1	.02	12/16/9905:03	12/16/9905:03	EL10-27	EL10-26	VAL2639	NA	NA
20242-1054	L060-02	ND	73	1	5.8	1.1	.021	12/14/9923:47	12/14/9923:47	EL09-12	EL09-2	VAL2339	12/09/99	12/10/99
20242-1055	L060-03	ND	80	1	10.1	1.1	.022	12/15/9913:12	12/15/9913:12	EL09-35	EL09-25	VAL2439	12/09/99	12/10/99
20242-1056	L060-04	ND	72	1	4.0	1	.021	12/15/9902:05	12/15/9902:05	EL09-16	EL09-14	VAL2339	12/09/99	12/10/99
20242-1057	L060-05	ND	73	1	5.9	1.1	.021	12/15/9902:40	12/15/9902:40	EL09-17	EL09-14	VAL2339	12/09/99	12/10/99
20242-1058	L060-06	ND	71	1	6.8	1.1	.021	12/15/9903:14	12/15/9903:14	EL09-18	EL09-14	VAL2339	12/09/99	12/10/99
20242-1059	L060-07	ND	78	1	7.9	1.1	.022	12/15/9903:49	12/15/9903:49	EL09-19	EL09-14	VAL2339	12/09/99	12/10/99
20242-1060	L060-08	ND	64	1	4.5	1	.021	12/15/9904:23	12/15/9904:23	EL09-20	EL09-14	VAL2339	12/09/99	12/10/99
20242-1061	L060-09	ND	69	1	2.9	1	.021	12/15/9904:58	12/15/9904:58	EL09-21	EL09-14	VAL2339	12/09/99	12/10/99
20242-1062	L060-10	ND	78	1	4.8	1.1	.021	12/15/9905:32	12/15/9905:32	EL09-22	EL09-14	VAL2339	12/09/99	12/10/99
20242-1063	L060-11	ND	75	1	2.5	1	.021	12/15/9906:07	12/15/9906:07	EL09-23	EL09-14	VAL2339	12/09/99	12/10/99
20242-1064	L060-12	ND	70	1	10.3	1.1	.022	12/15/9906:41	12/15/9906:41	EL09-24	EL09-14	VAL2339	12/09/99	12/10/99
20242-1065	L060-13	ND	72	1	7.5	1.1	.022	12/15/9907:50	12/15/9907:50	EL09-26	EL09-25	VAL2339	12/09/99	12/10/99
20242-1066	L060-14	ND	83	1	8.5	1.1	.022	12/15/9908:24	12/15/9908:24	EL09-27	EL09-25	VAL2339	12/09/99	12/10/99
20242-1067	L060-15	ND	73	1	12.7	1.1	.023	12/15/9908:59	12/15/9908:59	EL09-28	EL09-25	VAL2339	12/09/99	12/10/99
20242-1068	L060-16	ND	77	1	10.0	1.1	.022	12/16/9905:38	12/16/9905:38	EL10-28	EL10-26	VAL2639	12/09/99	12/10/99
20242-1069	L060-17	ND	77	1	14.8	1.2	.023	12/16/9906:12	12/16/9906:12	EL10-29	EL10-26	VAL2639	12/09/99	12/10/99
20242-1070	L060-18	ND	78	1	7.5	1.1	.022	12/16/9906:47	12/16/9906:47	EL10-30	EL10-26	VAL2639	12/09/99	12/10/99
20242-1071	L060-19	ND	76	1	4.3	1	.021	12/15/9912:01	12/15/9912:01	EL09-33	EL09-25	VAL2439	12/09/99	12/10/99
20242-1072	L060-20	ND	88	1	4.0	1	.021	12/15/9912:37	12/15/9912:37	EL09-34	EL09-25	VAL2439	12/09/99	12/10/99
20242-1073	L060-21	ND	77	1	4.9	1.1	.021	12/16/9907:22	12/16/9907:22	EL10-31	EL10-26	VAL2639	12/09/99	12/10/99
20242-1074	L060-22	ND	76	1	6.0	1.1	.021	12/16/9907:56	12/16/9907:56	EL10-32	EL10-26	VAL2639	12/09/99	12/10/99
20242-1075	L060-23	ND	75	1	13.7	1.2	.023	12/16/9908:31	12/16/9908:31	EL10-33	EL10-26	VAL2639	12/09/99	12/10/99
20242-1076	L060-24	ND	79	1	11.0	1.1	.022	12/16/9909:06	12/16/9909:06	EL10-34	EL10-26	VAL2639	12/09/99	12/10/99
20242-1077	L060-25	ND	75	1	13.2	1.2	.023	12/16/9909:41	12/16/9909:41	EL10-35	EL10-26	VAL2639	12/09/99	12/10/99
20242-1078	L060-26	ND	79	1	4.4	1	.021	12/14/9922:02	12/14/9922:02	EL09-9	EL09-2	VAL2339	12/09/99	12/10/99
20242-1078MS	L060-26M	6.01	85	1	4.4	1.05	.0209	12/14/9922:37	12/14/9922:37	EL09-10	EL09-2	VAL2339	12/09/99	12/10/99
20242-1078MSD	L060-26S	5.58	89	1	4.4	1.05	.0209	12/14/9923:12	12/14/9923:12	EL09-11	EL09-2	VAL2339	12/09/99	12/10/99
20242-1079	L060-27	ND	71	1	14.1	1.2	.023	12/16/9910:15	12/16/9910:15	EL10-36	EL10-26	VAL2639	12/09/99	12/10/99

SURR : Bromofluorobenzene(BFB), WATER:65-135%, SOIL:60-140%  
RL : Reporting Limit  
\* : Out of QC limit due to matrix interference

4004

METHOD 5030B/M8015  
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

Client : IT CORPORATION  
Project : MCAS EL TORO/20242/D.O. 112  
Batch No. : 99L060

Matrix : WATER  
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	SURR (%)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1W	VAL1739B	ND	87	1	NA	.1	.012	12/10/9914:03	12/10/9914:03	EL07-4	EL07-2	VAL1739	NA	NA
LCS1W	VAL1739L	1.3	96	1	NA	.1	.012	12/10/9914:39	12/10/9914:39	EL07-5	EL07-2	VAL1739	NA	NA
LCS1W	VAL1739C	1.16	99	1	NA	.1	.012	12/11/9901:10	12/11/9901:10	EL07-23	EL07-15	VAL1739	NA	NA
20242-1080	L060-28	ND	75	1	NA	.1	.012	12/11/9900:01	12/11/9900:01	EL07-21	EL07-15	VAL1739	12/09/99	12/10/99

SURR : Bromofluorobenzene(BFB), WATER:65-135%, SOIL:60-140%  
RL : Reporting Limit  
\* : Out of QC limit due to matrix interference

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
SDG NO.: 99L060  
METHOD: METHOD 5030B/M8015

MATRIX: WATER % MOISTURE: NA  
DILT N FACTR: 1 1 1  
SAMPLE ID: MBLK1W  
CONTROL NO.: VAL1739B VAL1739L VAL1739X  
LAB FILE ID: EL07-4 EL07-5 EL07-23  
DATE TIME EXTRCTD: 12/10/9914:03 12/10/9914:39 12/11/9901:10 DATE COLLECTED: NA  
DATE TIME ANALYZD: 12/10/9914:03 12/10/9914:39 12/11/9901:10 DATE RECEIVED:  
PREP. BATCH: VAL1739 VAL1739 VAL1739  
CALIB. REF: EL07-2 EL07-2 EL07-15

ACCESSION:

PARAMETER	BLNK RSLT mg/L	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Gasoline	ND	1.1	1.28	116	1.1	1.16	105	10	67-136	30

SURROGATE PARAMETER	SPIKE AMT mg/L	BS RSLT mg/L	BS % REC	SPIKE AMT mg/L	BSD RSLT mg/L	BSD % REC	QC LIMIT %
Bromofluorobenzene	.05	.0478	96	.05	.0495	99	65-135

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
SDG NO.: 99L060  
METHOD: METHOD 5030B/M8015

MATRIX: SOIL  
DILTIN FACTR: 1 1 % MOISTURE: NA  
SAMPLE ID: MBLK1S  
CONTROL NO.: VAL2339B VAL2339L VAL2339C  
LAB FILE ID: EL09-3 EL09-4 EL09-5  
DATIME EXTRCTD: 12/14/9918:30 12/14/9919:06 12/14/9919:41 DATE COLLECTED: NA  
DATIME ANALYZD: 12/14/9918:30 12/14/9919:06 12/14/9919:41 DATE RECEIVED:  
PREP. BATCH: VAL2339 VAL2339 VAL2339  
CALIB. REF: EL09-2 EL09-2 EL09-2

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Gasoline	ND	5.5	5.5	100	5.5	5.32	97	3	57-146	50

SURROGATE PARAMETER	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	QC LIMIT %
Bromofluorobenzene	.25	.215	86	.25	.234	94	60-140

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
SDG NO.: 99L060  
METHOD: METHOD 5030B/M8015

MATRIX: SOIL % MOISTURE: NA  
DILT N FACTR: 1 1  
SAMPLE ID: MBLK2S  
CONTROL NO.: VAL2439B VAL2439L VAL2439C  
LAB FILE ID: EL09-29 EL09-30 EL09-31  
DATE TIME EXTRACTED: 12/15/9909:34 12/15/9910:09 12/15/9910:43 DATE COLLECTED: NA  
DATE TIME ANALYZED: 12/15/9909:34 12/15/9910:09 12/15/9910:43 DATE RECEIVED:  
PREP. BATCH: VAL2439 VAL2439 VAL2439  
CALIB. REF: EL09-25 EL09-25 EL09-25

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Gasoline	ND	5.5	6.07	110	5.5	4.4	80	32	57-146	50

SURROGATE PARAMETER	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	QC LIMIT %
Bromofluorobenzene	.25	.243	97	.25	.153	61	60-140

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
SDG NO.: 99L060  
METHOD: METHOD 5030B/M8015

MATRIX: SOIL % MOISTURE: NA  
DILT N FACTR: 1 1  
SAMPLE ID: MBLK3S  
CONTROL NO.: VAL2639B VAL2639L VAL2639C  
LAB FILE ID: EL10-23 EL10-24 EL10-27  
DATIME EXTRCTD: 12/16/9902:44 12/16/9903:19 12/16/9905:03 DATE COLLECTED: NA  
DATIME ANALYZD: 12/16/9902:44 12/16/9903:19 12/16/9905:03 DATE RECEIVED:  
PREP. BATCH: VAL2639 VAL2639 VAL2639  
CALIB. REF: EL10-14 EL10-14 EL10-26

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Gasoline	ND	5.5	5.31	97	5.5	4.66	85	13	57-146	50

SURROGATE PARAMETER	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	QC LIMIT %
Bromofluorobenzene	.25	.212	85	.25	.209	83	60-140

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
SDG NO.: 99L060  
METHOD: METHOD 5030B/M8015

MATRIX: SOIL % MOISTURE: 4.4  
DILTN FACTR: 1 1  
SAMPLE ID: 20242-1078  
CONTROL NO.: L060-26 L060-26M L060-26S  
LAB FILE ID: EL09-9 EL09-10 EL09-11  
DATIME EXTRCTD: 12/14/9922:02 12/14/9922:37 12/14/9923:12 ✓ DATE COLLECTED: 12/09/99  
DATIME ANALYZD: 12/14/9922:02 12/14/9922:37 12/14/9923:12 DATE RECEIVED: 12/10/99  
PREP. BATCH: VAL2339 VAL2339 VAL2339  
CALIB. REF: EL09-2 EL09-2 EL09-2

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Gasoline	ND	5.75	5.98	104	5.75	5.54	96	8	57-146	50

SURROGATE PARAMETER	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	QC LIMIT %
Bromofluorobenzene	.262	.223	✓ 85	.262	.234	89	60-140

METHOD M8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : IT CORPORATION  
Project : MCAS EL TORO/2024/2/D.O. 112  
Batch No. : 99L060

Matrix : SOIL  
Instrument ID : GCT043

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SUR1 (%)	SUR2 (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Receive DATETIME
MBLK1S	DSL018SB	ND	82	72	1	NA	10	.834	12/19/9913:07	12/13/9915:00	DL08-3	DL08-2	DSL018S	NA	12/13/99
LCS1S	DSL018SL	374	92	81	1	NA	10	.834	12/19/9913:47	12/13/9915:00	DL08-4	DL08-2	DSL018S	NA	12/13/99
20242-1054	L060-02	ND	113	101	1	5.8	11	.89	12/19/9914:26	12/13/9915:00	DL08-5	DL08-2	DSL018S	12/09/99	12/10/99
20242-1054MS	L060-02M	526	114	106	1	5.8	10.6	.885	12/19/9915:06	12/13/9915:00	DL08-6	DL08-2	DSL018S	12/09/99	12/10/99
20242-1054MSD	L060-02S	597	127	117	1	5.8	10.6	.885	12/19/9915:46	12/13/9915:00	DL08-7	DL08-2	DSL018S	12/09/99	12/10/99
20242-1055	L060-03	ND	105	93	1	10.1	11	.93	12/19/9916:25	12/13/9915:00	DL08-8	DL08-2	DSL018S	12/09/99	12/10/99
20242-1056	L060-04	ND	117	109	1	4.0	10	.87	12/19/9917:05	12/13/9915:00	DL08-9	DL08-2	DSL018S	12/09/99	12/10/99
20242-1057	L060-05	ND	111	97	1	5.9	11	.89	12/19/9917:44	12/13/9915:00	DL08-10	DL08-2	DSL018S	12/09/99	12/10/99
20242-1058	L060-06	ND	109	98	1	6.8	11	.89	12/19/9918:24	12/13/9915:00	DL08-11	DL08-2	DSL018S	12/09/99	12/10/99
20242-1059	L060-07	ND	119	108	1	7.9	11	.91	12/19/9919:03	12/13/9915:00	DL08-12	DL08-2	DSL018S	12/09/99	12/10/99
20242-1060	L060-08	ND	114	101	1	4.5	10	.87	12/19/9920:22	12/13/9915:00	DL08-14	DL08-13	DSL018S	12/09/99	12/10/99
20242-1061	L060-09	ND	103	91	1	2.9	10	.86	12/19/9921:01	12/13/9915:00	DL08-15	DL08-13	DSL018S	12/09/99	12/10/99
20242-1062	L060-10	ND	117	102	1	4.8	11	.88	12/19/9921:41	12/13/9915:00	DL08-16	DL08-13	DSL018S	12/09/99	12/10/99
20242-1063	L060-11	ND	113	102	1	2.5	10	.86	12/19/9922:20	12/13/9915:00	DL08-17	DL08-13	DSL018S	12/09/99	12/10/99
20242-1064	L060-12	ND	119	106	1	10.3	11	.93	12/19/9923:00	12/13/9915:00	DL08-18	DL08-13	DSL018S	12/09/99	12/10/99
20242-1065	L060-13	ND	123	111	1	7.5	11	.9	12/19/9923:39	12/13/9915:00	DL08-19	DL08-13	DSL018S	12/09/99	12/10/99
20242-1066	L060-14	ND	111	94	1	8.5	11	.91	12/20/9900:18	12/13/9915:00	DL08-20	DL08-13	DSL018S	12/09/99	12/10/99
20242-1067	L060-15	ND	113	101	1	12.7	11	.96	12/20/9900:57	12/13/9915:00	DL08-21	DL08-13	DSL018S	12/09/99	12/10/99
20242-1068	L060-16	ND	105	89	1	10.0	11	.93	12/20/9901:37	12/13/9915:00	DL08-22	DL08-13	DSL018S	12/09/99	12/10/99
20242-1069	L060-17	ND	111	94	1	14.8	12	.98	12/20/9902:16	12/13/9915:00	DL08-23	DL08-13	DSL018S	12/09/99	12/10/99
20242-1070	L060-18	ND	120	104	1	7.5	11	.9	12/20/9903:34	12/13/9915:00	DL08-25	DL08-24	DSL018S	12/09/99	12/10/99
20242-1071	L060-19	ND	107	94	1	4.3	10	.87	12/20/9904:13	12/13/9915:00	DL08-26	DL08-24	DSL018S	12/09/99	12/10/99
20242-1072	L060-20	ND	105	91	1	4.0	10	.87	12/20/9904:53	12/13/9915:00	DL08-27	DL08-24	DSL018S	12/09/99	12/10/99
20242-1073	L060-21	ND	108	91	1	4.9	11	.88	12/20/9905:32	12/13/9915:00	DL08-28	DL08-24	DSL018S	12/09/99	12/10/99
MBLK2S	DSL019SB	ND	91	76	1	NA	10	.834	12/20/9906:11	12/13/9915:00	DL08-29	DL08-24	DSL019S	NA	12/13/99
LCS2S	DSL019SL	485	109	91	1	NA	10	.834	12/20/9906:50	12/13/9915:00	DL08-30	DL08-24	DSL019S	NA	12/13/99
LCD2S	DSL019SC	475	108	94	1	NA	10	.834	12/20/9907:29	12/13/9915:00	DL08-31	DL08-24	DSL019S	NA	12/13/99
20242-1074	L060-22	ND	108	89	1	6.0	11	.89	12/20/9908:08	12/13/9915:00	DL08-32	DL08-24	DSL019S	12/09/99	12/10/99
20242-1075	L060-23	ND	110	90	1	13.7	12	.97	12/20/9908:47	12/13/9915:00	DL08-33	DL08-24	DSL019S	12/09/99	12/10/99
20242-1076	L060-24	ND	121	100	1	11.0	11	.94	12/20/9909:27	12/13/9915:00	DL08-34	DL08-24	DSL019S	12/09/99	12/10/99
20242-1077	L060-25	ND	107	86	1	13.2	12	.96	12/20/9912:05	12/13/9915:00	DL08-38	DL08-35	DSL019S	12/09/99	12/10/99
20242-1078	L060-26	ND	117	93	1	4.4	10	.87	12/20/9912:44	12/13/9915:00	DL08-39	DL08-35	DSL019S	12/09/99	12/10/99
20242-1079	L060-27	ND	130	105	1	14.1	12	.97	12/20/9913:24	12/13/9915:00	DL08-40	DL08-35	DSL019S	12/09/99	12/10/99

RL : Reporting Limit  
SURRE1 : Bromobenzene  
SURRE2 : Hexacosane  
Parameter : H-C Range  
JP5 : C7 -C18  
Diesel : C10-C24  
Motor Oil : C18-C34  
Gas : C6 -C12

5004



METHOD M8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : IT CORPORATION  
Project : MCAS EL TORO/20242/D.O. 112  
Batch No. : 99L060

Matrix : WATER  
Instrument ID : GCT043

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/L)	SUR1 (%)	SUR2 (%)	DLF	MOIST	RL (mg/L)	MDL (mg/L)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Receive DATETIME
MBLK1W	DSL013WB	ND	88	97	1	NA	.1	.012	12/13/9919:29	12/10/9916:30	DL06-14	DL06-13	DSL013W	NA	12/10/99
LCS1W	DSL013WL	3.94	70	93	1	NA	.1	.012	12/13/9920:08	12/10/9916:30	DL06-15	DL06-13	DSL013W	NA	12/10/99
LCD1W	DSL013WC	4.96	96	110	1	NA	.1	.012	12/13/9920:48	12/10/9916:30	DL06-16	DL06-13	DSL013W	NA	12/10/99
20242-1080	L060-28	ND	87	99	.97	NA	.097	.012	12/14/9923:03	12/10/9916:30	DL06-55	DL06-53	DSL013W	12/09/99	12/10/99

RL : Reporting Limit  
SURRE1 : Bromobenzene  
SURRE2 : Hexacosane  
Parameter H-C Range  
JP5 C7 -C18  
Diesel C10-C24  
Motor Oil C18-C34  
Gas C6 -C12

5005

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
BATCH NO.: 99L060  
METHOD: METHOD M8015B

MATRIX: WATER % MOISTURE: NA  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: MBLK1W  
LAB SAMP ID: DSL013WB DSL013WL DSL013WC  
LAB FILE ID: DL06-14 DL06-15 DL06-16  
DATE EXTRACTED: 12/10/9916:30 12/10/9916:30 12/10/9916:30 DATE COLLECTED: NA  
DATE ANALYZED: 12/13/9919:29 12/13/9920:08 12/13/9920:48 DATE RECEIVED: 12/10/99  
PREP. BATCH: DSL013W DSL013W DSL013W  
CALIB. REF: DL06-13 DL06-13 DL06-13

ACCESSION:

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD ( % )	QC LIMIT ( % )	MAX RPD ( % )
Diesel	ND	5	3.94	79	5	4.96	99	23	61-143	30

SURROGATE PARAMETER	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	QC LIMIT ( % )
Bromobenzene	1	.702	70	1	.96	96	65-135
Hexacosane	1	.928	93	1	1.1	110	60-145

EMAX QUALITY CONTROL DATA  
LCS ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
BATCH NO.: 99L060  
METHOD: METHOD M8015B

MATRIX: SOIL % MOISTURE: NA  
DILUTION FACTOR: 1 1  
SAMPLE ID: MBLK1S  
LAB SAMP ID: DSL018SB DSL018SL  
LAB FILE ID: DL08-3 DL08-4  
DATE EXTRACTED: 12/13/9915:00 12/13/9915:00 DATE COLLECTED: NA  
DATE ANALYZED: 12/19/9913:07 12/19/9913:47 DATE RECEIVED: 12/13/99  
PREP. BATCH: DSL018S DSL018S  
CALIB. REF: DL08-2 DL08-2

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT ( % )
Diesel	ND	500	374	75	51-153

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	QC LIMIT ( % )
Bromobenzene	100	91.7	92	60-140
Hexacosane	100	80.5	81	55-150

EMAX QUALITY CONTROL DATA  
LCS/LCD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
BATCH NO.: 99L060  
METHOD: METHOD M8015B

MATRIX: SOIL % MOISTURE: NA  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: MBLK2S  
LAB SAMP ID: DSL019SB DSL019SL DSL019SC  
LAB FILE ID: DL08-29 DL08-30 DL08-31  
DATE EXTRACTED: 12/13/9915:00 12/13/9915:00 12/13/9915:00 DATE COLLECTED: NA  
DATE ANALYZED: 12/20/9906:11 12/20/9906:50 12/20/9907:29 DATE RECEIVED: 12/13/99  
PREP. BATCH: DSL019S DSL019S DSL019S  
CALIB. REF: DL08-24 DL08-24 DL08-24

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD ( % )	QC LIMIT ( % )	MAX RPD ( % )
Diesel	ND	500	485	97	500	475	95	2	51-153	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT ( % )
Bromobenzene	100	109	109	100	108	108	60-140
Hexacosane	100	90.6	91	100	93.9	94	55-150

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT: IT CORPORATION  
PROJECT: MCAS EL TORO/20242/D.O. 112  
PATCH NO.: 99L060  
THOD: METHOD M8015B

MATRIX: SOIL % MOISTURE: 5.8  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: 20242-1054  
LAB SAMP ID: L060-02 L060-02M L060-02S  
LAB FILE ID: DL08-5 DL08-6 DL08-7  
DATE EXTRACTED: 12/13/9915:00 12/13/9915:00 12/13/9915:00 DATE COLLECTED: 12/09/99  
DATE ANALYZED: 12/19/9914:26 12/19/9915:06 12/19/9915:46 DATE RECEIVED: 12/10/99  
PREP. BATCH: DSL018S DSL018S DSL018S  
CALIB. REF: DL08-2 DL08-2 DL08-2

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD ( % )	QC LIMIT ( % )	MAX RPD ( % )
Diesel	ND	531	526	99	531	597	113	13	51-153	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT ( % )
Bromobenzene	106	121	114	106	135	127	60-140
Hexacosane	106	113	106	106	124	117	55-150

***Appendix H***  
***Data Validation Reports***

## Laboratory Data Consultants, Inc. Data Validation Report

**Project/Site Name:** MCAS El Toro  
**Collection Date:** December 9, 1999  
**LDC Report Date:** February 17, 2000  
**Matrix:** Soil/Water  
**Parameters:** Volatiles  
**Validation Level:** NFESC Level C & D  
**Laboratory:** EMAX Laboratories, Inc.  
**Sample Delivery Group (SDG):** 99L060

### Sample Identification

20242-1053	20242-1073
20242-1054	20242-1074
20242-1055	20242-1075**
20242-1056	20242-1076
20242-1057	20242-1077
20242-1058	20242-1078
20242-1059	20242-1079
20242-1060	20242-1080
20242-1061	20242-1064MS
20242-1062	20242-1064MSD
20242-1063**	20242-1072MS
20242-1064	20242-1072MSD
20242-1065	20242-1079MS
20242-1066	20242-1079MSD
20242-1067	
20242-1068	
20242-1069	
20242-1070	
20242-1071	
20242-1072	

\*\*Indicates sample underwent NFESC Level D review

## Introduction

This data review covers 32 soil samples and 2 water samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8260A for Volatiles.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section V.

Field duplicates are summarized in Section XVI.

Samples indicated by a double asterisk on the front cover underwent a NFESC Level D review. A NFESC Level C review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Level C criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UU Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.



## I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

## II. GC/MS Instrument Performance Check

Instrument performance was checked at 12 hour intervals.

All ion abundance requirements were met.

## III. Initial Calibration

Initial calibration was performed using required standard concentrations.

Percent relative standard deviations (%RSD) were less than or equal to 30.0% for all calibration check compounds and less than or equal to 50.0% for all other compounds.

Average relative response factors (RRF) for all volatile target compounds and system monitoring compounds were within validation criteria.

## IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

All of the continuing calibration percent differences (%D) between the initial calibration RRF and the continuing calibration RRF were less than or equal to 25.0% for all calibration check compounds and less than or equal to 50.0% for all other compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
12/22/99	2-Chloroethylvinyl ether 2-Hexanone	100.0	20242-1075**	J	A
		56.5	20242-1076	J	
			20242-1077		
			20242-1078		
			20242-1079		
			20242-1079MS		
			20242-1079MSD MBLK3S		

All of the continuing calibration RRF values were within validation criteria with the following exceptions:

Date	Compound	RRF (Limits)	Associated Samples	Flag	A or P
12/21/99	Acetone	0.049 ( $\geq 0.05$ )	20242-1053 20242-1054 20242-1055 20242-1056 20242-1057 20242-1058 20242-1059 20242-1060 20242-1061 20242-1064 20242-1080 20242-1064MS 20242-1064MSD MBLK1W MBLK1S	J	A
12/22/99 (RLV446)	Acetone	0.043 ( $\geq 0.05$ )	20242-1062 20242-1063** 20242-1065 20242-1066 20242-1067 20242-1068 20242-1069 20242-1070 20242-1073 20242-1074 20242-1072MS 20242-1072MSD MBLK2S	J	A
12/22/99 (RLV468)	2-Chloroethylvinyl ether	0.00 ( $\geq 0.05$ )	20242-1075** 20242-1076 20242-1077 20242-1078 20242-1079 20242-1079MS 20242-1079MSD MBLK3S	J (all detects) R (all non-detects)	A

## V. Blanks

Method blanks were reviewed for each matrix as applicable. No volatile contaminants were found in the method blanks with the following exceptions:

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MBLK1W	12/21/99	Methylene chloride	2.6 ug/L	All water samples in SDG 99L060

Method Blank ID	Analysis Date	Compound TIC (RT in minutes)	Concentration	Associated Samples
MBLK1S	12/21/99	Methylene chloride	2.6 ug/Kg	20242-1054 20242-1055 20242-1056 20242-1057 20242-1058 20242-1059 20242-1060 20242-1061 20242-1064
MBLK2S	12/22/99	Methylene chloride	1.2 ug/Kg	20242-1062 20242-1063** 20242-1065 20242-1066 20242-1067 20242-1068 20242-1069 20242-1070 20242-1073 20242-1074
MBLK3S	12/23/99	Methylene chloride	2.4 ug/Kg	20242-1075** 20242-1076 20242-1077 20242-1078 20242-1079
MBLK4S	12/23/99	Methylene chloride	1.9 ug/Kg	20242-1071 20242-1072

Sample concentrations were compared to concentrations detected in the method blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
20242-1053	Methylene chloride	3 ug/L	5U ug/L
20242-1054	Methylene chloride	2.8 ug/Kg	5.3U ug/Kg
20242-1055	Methylene chloride	3.7 ug/Kg	5.6U ug/Kg
20242-1056	Methylene chloride	2.4 ug/Kg	5.2U ug/Kg
20242-1057	Methylene chloride	1.8 ug/Kg	5.3U ug/Kg
20242-1058	Methylene chloride	2.5 ug/Kg	5.4U ug/Kg

Sample	Compound TIC (RT in minutes)	Reported Concentration	Modified Final Concentration
20242-1059	Methylene chloride	2.7 ug/Kg	5.4U ug/Kg
20242-1060	Methylene chloride	1.8 ug/Kg	5.2U ug/Kg
20242-1061	Methylene chloride	1.7 ug/Kg	5.1U ug/Kg
20242-1064	Methylene chloride	1.6 ug/Kg	5.6U ug/Kg
20242-1062	Methylene chloride	2.6 ug/Kg	5.3U ug/Kg
20242-1063**	Methylene chloride	2.3 ug/Kg	5.1U ug/Kg
20242-1065	Methylene chloride	2.5 ug/Kg	5.4U ug/Kg
20242-1066	Methylene chloride	2.8 ug/Kg	5.5U ug/Kg
20242-1067	Methylene chloride	3.6 ug/Kg	5.7U ug/Kg
20242-1068	Methylene chloride	2.7 ug/Kg	5.6U ug/Kg
20242-1069	Methylene chloride	3.3 ug/Kg	5.9U ug/Kg
20242-1070	Methylene chloride	3.2 ug/Kg	5.4U ug/Kg
20242-1073	Methylene chloride	2.5 ug/Kg	5.3U ug/Kg
20242-1074	Methylene chloride	2.8 ug/Kg	5.3U ug/Kg
20242-1075**	Methylene chloride	3.5 ug/Kg	5.8U ug/Kg
20242-1076	Methylene chloride	4.1 ug/Kg	5.6U ug/Kg
20242-1077	Methylene chloride	4.2 ug/Kg	5.8U ug/Kg
20242-1078	Methylene chloride	3 ug/Kg	5.2U ug/Kg
20242-1079	Methylene chloride	3.4 ug/Kg	5.8U ug/Kg
20242-1071	Methylene chloride	1.4 ug/Kg	5.2U ug/Kg
20242-1072	Methylene chloride	1.3 ug/Kg	5.2U ug/Kg

## **VI. Surrogate Spikes**

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

## **VII. Matrix Spike/Matrix Spike Duplicates**

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

## **VIII. Laboratory Control Samples (LCS)**

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

## **IX. Regional Quality Assurance and Quality Control**

Not applicable.

## **X. Internal Standards**

All internal standard areas and retention times were within QC limits.

## **XI. Target Compound Identifications**

All target compound identifications were within validation criteria for samples on which a NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by Level C criteria.

## **XII. Compound Quantitation and CRQLs**

All compound quantitation and CRQLs were within validation criteria for samples on which a NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by Level C criteria.

## **XIII. Tentatively Identified Compounds (TICs)**

Tentatively identified compounds were not reported by the laboratory.

## **XIV. System Performance**

The system performance was within validation criteria for samples on which a NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by Level C criteria.

## XV. Overall Assessment of Data

Data flags have been summarized at the end of the report.

## XVI. Field Duplicates

Samples 20242-1062 and 20242-1063\*\* and samples 20242-1074 and 20242-1075\*\* were identified as field duplicates. No volatiles were detected in any of the samples with the following exceptions:

Compound	Concentration (ug/Kg)		RPD
	20242-1062	20242-1063**	
Methylene chloride	2.6	2.3	12

Compound	Concentration (ug/Kg)		RPD
	20242-1074	20242-1075**	
Methylene chloride	2.8	3.5	22

## XVII. Field Blanks

Sample 20242-1053 was identified as a trip blank. No volatile contaminants were found in this blank with the following exceptions:

Trip Blank ID	Compound	Concentration (ug/L)
20242-1053	Methylene chloride	3

Sample 20242-1080 was identified as an equipment rinsate. No volatile contaminants were found in this blank.

**MCAS EI Toro**  
**Volatiles - Data Qualification Summary - SDG 99L060**

SDG	Sample	Compound	Flag	A or P	Reason
99L060	20242-1075** 20242-1076 20242-1077 20242-1078 20242-1079	2-Chloroethylvinyl ether 2-Hexanone	J J	A	Continuing calibration (%D)
99L060	20242-1053 20242-1054 20242-1055 20242-1056 20242-1057 20242-1058 20242-1059 20242-1060 20242-1061 20242-1064 20242-1080 20242-1062 20242-1063** 20242-1065 20242-1066 20242-1067 20242-1068 20242-1069 20242-1070 20242-1073 20242-1074	Acetone	J	A	Continuing calibration (RRF)
99L060	20242-1075** 20242-1076 20242-1077 20242-1078 20242-1079	2-Chloroethylvinyl ether	J (all detects) R (all non-detects)	A	Continuing calibration (RRF)

**MCAS EI Toro**  
**Volatiles - Laboratory Blank Data Qualification Summary - SDG 99L060**

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
99L060	20242-1053	Methylene chloride	5U ug/L	A
99L060	20242-1054	Methylene chloride	5.3U ug/Kg	A
99L060	20242-1055	Methylene chloride	5.6U ug/Kg	A
99L060	20242-1056	Methylene chloride	5.2U ug/Kg	A

SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
99L060	20242-1057	Methylene chloride	5.3U ug/Kg	A
99L060	20242-1058	Methylene chloride	5.4U ug/Kg	A
99L060	20242-1059	Methylene chloride	5.4U ug/Kg	A
99L060	20242-1060	Methylene chloride	5.2U ug/Kg	A
99L060	20242-1061	Methylene chloride	5.1U ug/Kg	A
99L060	20242-1064	Methylene chloride	5.6U ug/Kg	A
99L060	20242-1062	Methylene chloride	5.3U ug/Kg	A
99L060	20242-1063**	Methylene chloride	5.1U ug/Kg	A
99L060	20242-1065	Methylene chloride	5.4U ug/Kg	A
99L060	20242-1066	Methylene chloride	5.5U ug/Kg	A
99L060	20242-1067	Methylene chloride	5.7U ug/Kg	A
99L060	20242-1068	Methylene chloride	5.6U ug/Kg	A
99L060	20242-1069	Methylene chloride	5.9U ug/Kg	A
99L060	20242-1070	Methylene chloride	5.4U ug/Kg	A
99L060	20242-1073	Methylene chloride	5.3U ug/Kg	A
99L060	20242-1074	Methylene chloride	5.3U ug/Kg	A
99L060	20242-1075**	Methylene chloride	5.8U ug/Kg	A
99L060	20242-1076	Methylene chloride	5.6U ug/Kg	A
99L060	20242-1077	Methylene chloride	5.8U ug/Kg	A
99L060	20242-1078	Methylene chloride	5.2U ug/Kg	A
99L060	20242-1079	Methylene chloride	5.8U ug/Kg	A



SDG	Sample	Compound TIC (RT in minutes)	Modified Final Concentration	A or P
99L060	20242-1071	Methylene chloride	5.2U ug/Kg	A
99L060	20242-1072	Methylene chloride	5.2U ug/Kg	A

## Laboratory Data Consultants, Inc. Data Validation Report

**Project/Site Name:** MCAS El Toro  
**Collection Date:** December 9, 1999  
**LDC Report Date:** February 18, 2000  
**Matrix:** Soil/Water  
**Parameters:** Total Petroleum Hydrocarbons as Gasoline  
**Validation Level:** NFESC Level C & D  
**Laboratory:** EMAX Laboratories, Inc.

**Sample Delivery Group (SDG):** 99L060

### Sample Identification

20242-1054	20242-1074
20242-1055	20242-1075**
20242-1056	20242-1076
20242-1057	20242-1077
20242-1058	20242-1078
20242-1059	20242-1079
20242-1060	20242-1080
20242-1061	20242-1054MS
20242-1062	20242-1054MSD
20242-1063**	
20242-1064	
20242-1065	
20242-1066	
20242-1067	
20242-1068	
20242-1069	
20242-1070	
20242-1071	
20242-1072	
20242-1073	

\*\*Indicates sample underwent NFESC Level D review

## Introduction

This data review covers 28 soil samples and one water sample listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Method 8015 modified for Total Petroleum Hydrocarbons (TPH) as Gasoline.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994) as there are no current guidelines for the method stated above.

A table summarizing all data qualification is provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blank results are summarized in Section III.

Field duplicates are summarized in Section IX.

Samples indicated by a double asterisk on the front cover underwent a NFESC Level D review. A NFESC Level C review was performed on all of the other samples. Raw data were not evaluated for the samples reviewed by Level C criteria since this review is based on QC data.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

## **I. Technical Holding Times**

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

## **II. Calibration**

### **a. Initial Calibration**

Initial calibration of compounds was performed as required by the method.

The percent relative standard deviations (%RSD) of calibration factors for compounds were less than or equal to 20.0% .

### **b. Calibration Verification**

Calibration verification was performed at required frequencies. The percent differences (%D) of amounts in continuing standard mixtures were within the 15.0% QC limits.

## **III. Blanks**

Method blanks were reviewed for each matrix as applicable. No total petroleum hydrocarbons as gasoline contaminants were found in the method blanks.

## **IV. Accuracy and Precision Data**

### **a. Surrogate Recovery**

Surrogates were added to all samples and blanks as required by the method. All surrogate recoveries (%R) were within QC limits.

### **b. Matrix Spike/Matrix Spike Duplicates**

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

### **c. Laboratory Control Samples**

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

## **V. Target Compound Identification**

All target compound identifications were within validation criteria for samples on which a NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by Level C criteria.

## **VI. Compound Quantitation and CRQLs**

All compound quantitation and CRQLs were within validation criteria for samples on which a NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by Level C criteria.

## **VII. System Performance**

The system performance was within validation criteria for samples on which a NFESC Level D review was performed. Raw data were not evaluated for the samples reviewed by Level C criteria.

## **VIII. Overall Assessment of Data**

Data flags have been summarized at the end of this report.

## **IX. Field Duplicates**

Samples 20242-1062 and 20242-1063\*\* and samples 20242-1074 and 20242-1075\*\* were identified as field duplicates. No total petroleum hydrocarbons as gasoline were detected in any of the samples.

## **X. Field Blanks**

Sample 20242-1080 was identified as an equipment rinsate. No total petroleum hydrocarbons as gasoline contaminants were found in this blank.

**MCAS El Toro**

**Total Petroleum Hydrocarbons as Gasoline - Data Qualification Summary - SDG 99L060**

No Sample Data Qualified in this SDG

**MCAS El Toro**

**Total Petroleum Hydrocarbons as Gasoline - Laboratory Blank Data Qualification Summary - SDG 99L060**

No Sample Data Qualified in this SDG

## Laboratory Data Consultants, Inc. Data Validation Report

**Project/Site Name:** MCAS El Toro  
**Collection Date:** December 9, 1999  
**LDC Report Date:** February 18, 2000  
**Matrix:** Soil/Water  
**Parameters:** Total Petroleum Hydrocarbons as Extractables  
**Validation Level:** NFESC Level C & D  
**Laboratory:** EMAX Laboratories, Inc.  
**Sample Delivery Group (SDG):** 99L060

### Sample Identification

20242-1054	20242-1074
20242-1055	20242-1075**
20242-1056	20242-1076
20242-1057	20242-1077
20242-1058	20242-1078
20242-1059	20242-1079
20242-1060	20242-1080
20242-1061	20242-1054MS
20242-1062	20242-1054MSD
20242-1063**	
20242-1064	
20242-1065	
20242-1066	
20242-1067	
20242-1068	
20242-1069	
20242-1070	
20242-1071	
20242-1072	
20242-1073	

\*\*Indicates sample underwent NFESC Level D review

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**MCAS EI Toro**

**Total Petroleum Hydrocarbons as Extractables - Data Qualification Summary - SDG 99L060**

No Sample Data Qualified in this SDG

**MCAS EI Toro**

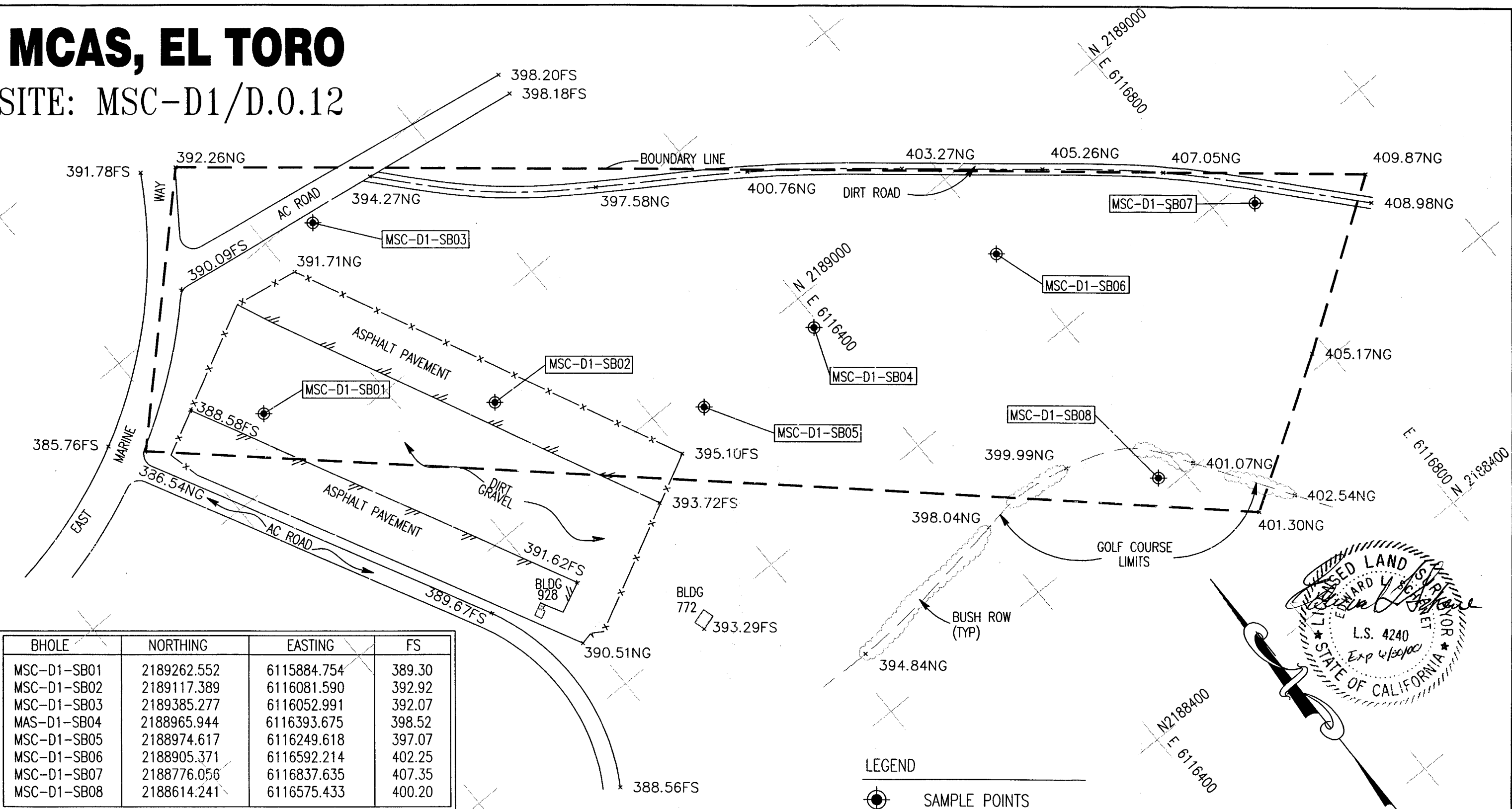
**Total Petroleum Hydrocarbons as Extractables - Laboratory Blank Data Qualification Summary - SDG 99L060**

No Sample Data Qualified in this SDG

***Appendix I***  
***Land Survey Data***

# MCAS, EL TORO

SITE: MSC-D1/D.0.12



BHOLE	NORTHING	EASTING	FS
MSC-D1-SB01	2189262.552	6115884.754	389.30
MSC-D1-SB02	2189117.389	6116081.590	392.92
MSC-D1-SB03	2189385.277	6116052.991	392.07
MAS-D1-SB04	2188965.944	6116393.675	398.52
MSC-D1-SB05	2188974.617	6116249.618	397.07
MSC-D1-SB06	2188905.371	6116592.214	402.25
MSC-D1-SB07	2188776.056	6116837.635	407.35
MSC-D1-SB08	2188614.241	6116575.433	400.20

**CAL VADA**  
**SURVEYING, INC.**  
108 Business Center Dr., Corona, Ca 92880-1782  
PHONE: (909) 280-9960 FAX: (909) 280-9746

JOB NO. 97102MSC-D1

PREPARED FOR:  
**IT CORPORATION**  
3347 MICHELSON DR., SUITE 200  
IRVINE, CA 92612-1692  
(949) 660-7594

- LEGEND
- SAMPLE POINTS
  - ⊙ VALVE
  - FS FINISH SURFACE
  - TC TOP OF CURB
  - ⊠ FH FIRE HYDRANT
  - CHAIN LINK FENCE

DATE OF SURVEY: 12-14-99

